

**Attachment E – Contingency Plan set via email on 8/23/12**





GSK-UM ICP Plan

Buck Eardley

to:

Debbie Moody

08/22/2012 02:17 PM

Cc:

Deanna Herman

Hide Details

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1 Attachment



UM 2011 ICP.pdf



# INTEGRATED CONTINGENCY PLAN



UPPER MERION TOWNSHIP  
MONTGOMERY COUNTY, PENNSYLVANIA

PREPARED BY

IES ENGINEERS, INC.

**REVISED**  
**DECEMBER 2001**  
**JULY 2004**  
**JULY 2008**  
**MAY 2009**  
**JUNE 2009**  
**FEBRUARY 2011**

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**SUMMARY OF  
IMPORTANT PHONE NUMBERS**

<b>Title</b>	<b>Person</b>	<b>Phone Number</b>
Environmental Manager	Deanna Herman	W: 610-917-7343 C: 484-571-4644 H: 610-856-1203
Director, Hazardous Substance Control and Governance	Richard Rebar	W: 610-270-7936 C: 484-571-1059 H: 610-696-8143
Site Safety and Environmental Coordinator Building 40	Michael Malchitsky	W: 610-239-3838 C: 484-597-6654 H: 610-420-6984

W     =     Work  
 H     =     Home  
 C     =     Cell Phone  
 P     =     Pager

INTEGRATED CONTINGENCY PLAN  
(ICP)  
DISTRIBUTION LIST

NAME

Ms. Deanna Herman  
Mr. Richard Rebar  
Mr. Michael Malchitsky  
Mr. Allen Drucker  
Mr. John DaCosta  
Mr. Robert Nash  
Emergency Response Truck  
Security (Gate 2)  
Pennsylvania Department of Environmental Protection  
Upper Merion Township Police Department  
Upper Merion Township Fire Department  
Montgomery County Emergency Planning Commission  
GSK EHS Department

## INTRODUCTION

This Integrated Contingency Plan (ICP) was developed to yield a highly effective and functional document for use during emergency situations involving fire, explosion, or release of hazardous materials, oil/petroleum products, or contaminated storm water discharges where this release poses a risk to human health or the environment.

The use of a single plan will reduce the confusion experienced by many first responders during emergency response incidents at multi-plan required facilities. It will minimize duplication in the preparation of emergency plans, thereby, reducing costs for plan administrators.

A copy of the ICP and any subsequent revisions will be maintained in the Environmental, Health, and Safety Department (EH&S) at GlaxoSmithKline Pharmaceuticals (GSK) located in Upper Merion Township, County of Montgomery, Pennsylvania.

This plan will be reviewed and revised for any of the following conditions:

- subsequent regulatory changes
- changes in facility "key" personnel
- changes in structure or design of facility that may contribute to increased risk to human health or the environment
- the plan requires revisions based on actual experience

The elements of this ICP have been structured following the Pennsylvania Department of Environmental Protection (Department) "Guidelines for the Development and Implementation of Environmental Emergency Plans," as dated August 6, 2005 and the U.S. EPA's Integrated Contingency Plan Guidance found in the June 5, 1996, Federal Register. This ICP covers the requirements for the following plans:

- Preparedness, Prevention, and Contingency (PPC) Plan for large quantity hazardous waste generators
- Spill Prevention Response (SPR) Plan for Downstream Users
- Spill Prevention Control and Countermeasure (SPCC) Plan as required by 40 CFR Part 112 with respect to the storage and use of oil/petroleum products
- Accidental Spill Prevention Plan and Slug Discharge Control Plan for Upper Merion Township wastewater discharge permit

Distribution of this plan shall include: Montgomery County Emergency Planning Commission and the Pennsylvania Department of Environmental Protection, Upper Merion Police Department, Upper Merion Fire Department, and those people directly associated with response activities at GSK.

The ICP has been prepared specifically for the Upper Merion site. Descriptions of the existing plans and contents have been presented below. Key elements and regulatory requirements from each of these plans have been incorporated in the ICP. Along with this ICP, they constitute the pollution incident prevention and emergency response documents for the Upper Merion site. Descriptions of the existing Emergency Response Plans (ERPs) are presented below. Requirements from each of these plans have been incorporated into the inclusive ICP.

## OIL/PETROLEUM SPILL PREVENTION CONTROL AND COUNTERMEASURE

The United States Environmental Protection Agency (EPA) requires industries to develop a Spill Prevention Control and Countermeasure (SPCC) Plan if they are engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing, or consuming oil and oil products, and if, due to their location, they could reasonably be expected to discharge oil/petroleum products in harmful quantities into navigable waters of the United States or adjoining shorelines. On-shore facilities with underground oil storage capacity exceeding 42,000 gallons, or with an aboveground oil storage capacity exceeding 1,320 gallons, which reasonably could discharge oil into navigable waters of the United States, are required to comply with the provisions of 40 CFR Part 112 and develop and implement an SPCC Plan. This ICP includes the oil storage capacities of all the transformers at the Upper Merion site. Since the GSK Upper Merion site has an underground oil storage capacity of 90,000 gallons and an aboveground oil storage in bulk containers totaling 80,395 gallons and 14,757 gallons of oil in oil-containing electrical equipment, this ICP incorporates the necessary provisions to comply with 40 CFR Part 112.

**SECTION 1**  
**GENERAL**

## 1.0 FACILITY IDENTIFICATION INFORMATION

- A. Facility Name: GlaxoSmithKline Pharmaceuticals
- B. Owner/Address: GlaxoSmithKline Pharmaceuticals  
709 Swedeland Road  
King of Prussia, PA 19406  
Upper Merion Township  
Montgomery County
- C. Designated Correspondence Contact: Ms. Deana Herman  
Environmental Manager
- D. EPA ID#: PAD980551964  
SIC Code: 2834
- E. ICP Plan Development Contact: Mr. Richard Rebar
- F. Phone Numbers/Key Contacts: Reference ICP Coordinator Table
- G. EH&S Phone: 610-270-7810
- H. EH&S Fax: 610-270-7197
- I. Site Location: Norristown Quadrangle (see Appendix A)  
Latitude: 40.075 N  
Longitude: -75.329 W

## 2.0 CERTIFICATIONS

Various certifications are required for the ICP in accordance with various federal and state regulations and/or permits. This section contains the necessary certifications that are required for the implementation of the ICP.

### 2.1 OIL SPILL PREVENTION AND CONTROL MEASURES

#### 2.1.1 Substantial Harm Criteria

As required by 40 CFR Part 112, this facility is required to complete and maintain a certification showing that the facility does not meet the substantial harm criteria as defined in 40 CFR Part 112. The associated certification is found on page 2-3.

#### 2.1.2 Engineering Certification

As required by 40 CFR Part 112, the portions of this plan that address the Spill, Prevention, Control and Countermeasure (SPCC) requirements of 40 CFR Part 112 must be reviewed and certified by a registered Professional Engineer to be effective. The Professional Engineer Certification for the SPCC requirements is found on page 2-4.

#### 2.1.3 Amendment and Review of SPCC Plan

As required by 40 CFR Part 112.5 (b), GSK is required to complete a review and evaluation of the SPCC Plan at least once every 5 years from the date of the last review. The SPCC Plan Review and Evaluation Certification, including the date of the last review and evaluation is found on page 2-4.1.

**SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN CERTIFICATION**  
**OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA**

Facility Name: GlaxoSmithKline Pharmaceuticals Company

Facility Addresses: 709 Swedeland Road  
King of Prussia, PA 19406

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

Yes ☐ No ☒

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

Yes ☐ No ☒

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula {1}) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, Section 10, for availability) and the applicable Area Contingency Plan.

Yes ☐ No ☒

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula {1}) such that a discharge from the facility would shut down a public drinking water intake {2}?

Yes ☐ No ☒

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes ☐ No ☒

**CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate and complete.

Deanna Herman  
Signature

Environmental Mgr., EH&S Department  
Title

Ms. Deanna Herman  
Name (please type or print)

2/23/11  
Date

<sup>1</sup> If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.

<sup>2</sup> For the purposes of 40 CFR Part 112, public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c).

SPILL PREVENTION CONTROL AND COUNTERMEASURE PROCEDURES  
ENGINEERING CERTIFICATION (Required by 40 CFR Part 112)

- A. Name of Facility - GlaxoSmithKline Pharmaceuticals
- B. Type of Facility - Research and Development/Manufacturing
- C. Date of Initial Operation - See Site History
- D. Location of Facility - 709 Swedeland Road, King of Prussia, PA
- E. Name and Address of Owner - GlaxoSmithKline  
709 Swedeland Road  
King of Prussia, PA 19406
- F. Designated Person Responsible for Oil Spill Prevention -  
  
NAME: Ms. Deanna Herman, Environmental Manager – EH&S  
Department
- G. Oil Spill History - Summary of oil spill events for this facility is contained in Appendix D
- H. Management Approval - Full approval is extended by management at a level with authority to commit the necessary resources.

SIGNATURE: Deanna Herman

NAME: Ms. Deanna Herman

TITLE: Environmental Manager, EH&S Department

I hereby certify that I and/or my agent has visited and examined the facility, and being familiar with the provisions of 40 CFR Part 112, attest,

- That the parts of the ICP listed in the Cross Reference Matrix, Appendix H have been prepared in accordance with good engineering practices and with requirements of 40 CFR Part 112
- That procedures for required inspections and testing have been established, and
- That these sections of the ICP are adequate for the facility

NAME: Robert W. Schlosser

SIGNATURE: Robert W. Schlosser

REGISTRATION NO.: PE031199E

STATE: Pennsylvania

DATE: 2/24/11

**SPCC REQUIREMENTS-AMENDMENT/REVIEW CERTIFICATION**

I have completed review and evaluation of the parts of the ICP related to the requirements of 40 CFR Part 112 for GlaxoSmithKline Pharmaceuticals, Upper Merion Facility on the date indicated below and the plan is required to be amended as a result. The engineering certification of this plan is contingent on GSK completing the required corrective actions within the proposed schedule. This evaluation is made pursuant to 40 CFR Part 112.5 (b).

Date of Evaluation/Review: February 16, 2011

Name: Robert W. Schlosser, P.E.

Title: Principal Project Manager

Signature: 

Date: 2/24/11

A site review was completed in November 2010 to determine if the corrective actions proposed in December 2009 were completed. All required corrective actions have been completed.

### 3.0 DESCRIPTION OF SITE ACTIVITIES

#### **Site History**

The GSK Upper Merion site was purchased in the early 1950's to be used predominantly for animal health research. At the same time, "Thorazine," a tranquilizing compound, was coming on stream in the human pharmaceutical division. A decision was made to manufacture this product in a new chemical production building at the Upper Merion site. As other new pharmaceutical products were developed, the chemical production operations grew to keep pace with demand. Research operations, including human pharmaceuticals, expanded at the site during the 1960's and 1970's. An antibiotic manufacturing facility was added to the site in the early 1970's.

In 1983, a new facility for molecular biology research was occupied on the western segment of the Upper Merion site. This was Phase I of the total Research and Development Consolidation, which was completed in January 1987. Research is the primary activity carried on at the Upper Merion site.

In 1987, a new pharmaceutical manufacturing facility was added for the production of sterile injectables (Building 16).

In 1995, a biopharmaceutical research and manufacturing facility was opened.

In 2000, operations in the antibiotic manufacturing facility were discontinued. Building 1 and the associated Building 1 Tank Farm have been demolished and no longer exist.

In 2005 GSK ceased operations in Building 16. The Building was leased and the Lessee had taken over all responsibility for the building and property. The lessee terminated its lease agreement in 2008, and in 2009 Building 16 and associated sources were decommissioned.

The GSK site houses two types of operations. Research and Development activities comprise 90 percent of the site operations, with the remainder composed of Biopharmaceutical Manufacturing located in Building 40 of the site.

#### **Research and Development**

Research and development activities are focused on the discovery and development of pharmaceutical products that provide significant and measurable medical benefit. These activities involve a wide spectrum of experiments carried out under controlled laboratory conditions and pilot scale-up. Some of these research activities result in small quantities of waste residuals. The waste residuals are consolidated and disposed of at permitted offsite waste disposal facilities.

### **Biopharmaceutical Manufacturing Facility (Building 40)**

GSK manufactures bulk pharmaceutical products using biological synthesis techniques in this building. Animal cells that have been modified to generate pharmaceutical products are grown in sealed reactors. The pharmaceutical products are extracted from the mature reactor broth using a variety of physical and chemical separation techniques. A quality control lab supports the manufacturing operations. Any waste residuals are consolidated and disposed of at permitted offsite facilities.

### **Incinerator Facilities**

GSK maintains three incinerators on the Upper Merion Site: Building 21 Residual Waste Incinerator, Building 3 Residual Waste Incinerator, and Building 26 Commercial, Industrial, Solid Waste Incinerator (CISWI). All three incinerators are operated and maintained by contractor services. Contractor services conduct all waste transfer and consolidation activities. All waste processed in the incinerators is generated exclusively within the GSK research laboratories at the Upper Merion facility. If waste generated outside the Upper Merion facility is to be processed in the incinerator, GSK must first obtain approval from PADEP to process offsite waste in the incinerator.

## **3.1 INVENTORY**

### **3.1.1 MATERIALS AND WASTE INVENTORY**

This section contains the names, locations, sources, and quantities of raw chemical materials, commercial chemical products, manufacturing chemical intermediates, fuel oils, other oils, and wastes handled at the site that have the potential for causing environmental degradation or endangerment of public health and safety through accidental release. The description and quantities of the materials that correspond to the locations are indicated on the Site Plan in Appendix A. GSK removed most underground fuel oil storage tanks and replaced them with aboveground tanks. Other tanks were evaluated and found to be safe and will not be removed.

Material Safety Data Sheets (MSDS's) are maintained in an electronic data format accessible via the R&D web page. The Corporate Environmental and Safety Department updates this database frequently with information on new chemical products and intermediates. The MSDSs for these materials have been purposefully omitted from this Plan because of the magnitude of the materials handled onsite. Most of these materials are typically in small containers of up to 5-gallons for use in the various laboratories. In the event of an accident or emergency involving one or more of the materials, the appropriate MSDSs will be made available at the designated command post to responding emergency personnel.

The inventory listing does not include the chemicals within the individual laboratories. These laboratories utilize a wide variety of chemicals in small amounts, typically less than one or two gallons in quantity. However, the solvent vaults, which are the storage areas for all chemicals, are included. All regulated storage tanks are registered with the Department in accordance with Sections 303 and 503 of the Pennsylvania Storage Tank and Spill Prevention Act.

## MATERIALS AND WASTE INVENTORY

PADEP Tank Number	GSK Tank Number	Material Description	Quantity Stored (Gallons)	Location
---	FT3-1 <sup>1</sup>	Diesel Fuel	5,000	Building 3
---	CT3-1	Formalin Waste	4,575	Building 3 Outside
---	FT3-2 <sup>1</sup>	Diesel Fuel	500	Building 3 - EGEN Tank
---	FT3-3 <sup>1</sup>	Diesel Fuel	500	Building 3 - EGEN Tank
---	FT4-1 <sup>1</sup>	Diesel Fuel	275	Building 4 - EGEN Tank
---	FT4-2 <sup>1</sup>	Diesel Fuel	275	Building 4 - EGEN Tank
---	FT5-1 <sup>1</sup>	#2 Fuel Oil	15,000	Building 5
---	FT44-1 <sup>1</sup>	#6 Fuel Oil	30,000	Building 44
---	FT10-1 <sup>1</sup>	Diesel Fuel	500	Building 10 - EGEN Tank
---	FT10-2 <sup>1</sup>	Diesel Fuel	300	Building 10 - EGEN Tank
---	FT11-1 <sup>1</sup>	Diesel Fuel	275	Building 11 - EGEN Tank
---	FT17-1	Diesel Fuel	200	Building 17 - EGEN Tank
---	FT18-1	Diesel Fuel	20	Building 18 - EGEN Tank
---	FT38-1 <sup>1</sup>	Diesel Fuel	500	Building 38 - EGEN Tank
---	FT38-2 <sup>1</sup>	Diesel Fuel	500	Building 38 - EGEN Tank
---	CT40-1	Dextrose	13,200	Building 40
---	CT40-2	Ammonium Hydroxide	8,000	Building 40
032A	032A <sup>1</sup>	Diesel Fuel	1,800	Building 40
---	FT40-1 <sup>1</sup>	Diesel Fuel	500	Building 40 - EGEN Tank
---	FT32-1 <sup>1</sup>	#2 Fuel Oil	20,000	Building 32

<sup>1</sup> Location subject to 40 CFR Part 112.

Note: Locations of most materials are presented on the facility map found in Appendix A.

**MATERIALS AND WASTE INVENTORY**  
(continued)

<b>PADEP Tank Number</b>	<b>GSK Tank Number</b>	<b>Material Description</b>	<b>Quantity Stored (Gallons)</b>	<b>Location</b>
033A	---	Sulfuric Acid	1,000	Building 20
---	CT20-1	Sodium Hypochlorite	200	Building 20
---	CT20-2	NALCO 3DT289 (Phosphoric Acid)	200	Building 20
---	CT20-3	NALCO 1824 (Cyclohexylamine)	80	Building 20
---	CT20-4	NALCO 19 (Sodium Sulfite)	80	Building 20
---	CT20-5	NALCO NEXGUARD 22311	120	Building 20
---	FT20-1	Diesel Fuel	200	Building 20 - EGEN Tank
---	FT20-2 <sup>1</sup>	Diesel Fuel	1,000	Building 20
---	FT24-1 <sup>1</sup>	Diesel Fuel	1,200	Building 24 - EGEN Tank
---	FT24-2 <sup>1</sup>	Diesel Fuel	500	Building 24 - EGEN Tank
---	12	Hazardous Waste/Virgin Material Storage Pad (Separated by Diking)	Approx. 100 55-gal drums	Drum Pad
---	---	Chemical Waste	150 Gallon Hazardous Waste Tank	Building 4 Loading Dock
---	14	Solvent Vault Room 317 (Laboratory Chemicals)	Various Quantities of 55-Gal (or less) containers	Building 4
---	15	Solvent Vault Loading Dock (East Campus Receiving Dock)	Various quantities of 5-gal (or less) containers	Building 3
---	16	Product Drum Storage Pad	Approx. 40 to 60 55-gal drums	Building 48

<sup>1</sup> Location subject to 40 CFR Part 112.

Note: Locations of most materials are presented on the facility map found in Appendix A.

**MATERIALS AND WASTE INVENTORY**  
(continued)

<b>PADEP Tank Number</b>	<b>GSK Tank Number</b>	<b>Material Description</b>	<b>Quantity Stored (Gallons)</b>	<b>Location</b>
---	17	Chemical and Radioactive Storage Building	Approx 100 55-gal drums of radioactive waste and 30 to 50 55- gal containers of chemical waste	Building 35
---	21	Municipal Waste Dumpsters	Various Facility Dumpsters	Site-Wide
---	23	Solvent Vault Second Floor (Laboratory Chemicals)	Various quantities of 5-gal (or less) containers	Building 29A
---	24	Solvent Vault First Floor (Laboratory Chemicals)	Various quantities of 5-gal (or less) containers	Building 29
---	25	Solvent Vault First Floor (Laboratory Chemicals)	Various quantities of 5-gal (or less) containers and 20-25 55-gal drums	Building 28
---	26	Solvent Vault Lower Level (Laboratory Chemicals)	Various quantities of 5-gal (or less) containers	Building 24
---	30	Various Boiler Water Treatment Chemicals	20 to 25 55-gal drums	Building 20
---	33	(2) Aboveground Liquid Nitrogen Storage Tank	3,000 gal (each)	Building 5, Building 14
---	33A	Aboveground Liquid Nitrogen Storage Tank	6,500	Building 26

<sup>1</sup> Location subject to 40 CFR Part 112.

<sup>2</sup> Location subject to storm water plan guidance.

Note: Locations of most materials are presented on the facility map found in Appendix A.

**MATERIALS AND WASTE INVENTORY**  
(continued)

<b>PADEP Tank Number</b>	<b>GSK Tank Number</b>	<b>Material Description</b>	<b>Quantity Stored (Gallons)</b>	<b>Location</b>
---	34	Aboveground Liquid CO <sub>2</sub> Storage Tank	1,400	Building 21
---	36	Flammable and Non-Flammable Cylinder Storage Area	Approximately 50 full size cylinders	Building 4
---	37 <sup>2</sup>	Loading and Unloading Docks	Various quantities of materials and supplies	Building 3, 4, 5, 25
---	39	Aboveground Liquid Nitrogen Storage Tank	6,000	Building 9
---	40	Aboveground Syltherm (Coolant) Storage Tank	90	Building 24
---	41	Product Drum Storage Pad	40 to 60 55-gal drums	Building 47
---	46	Aboveground Mineral Oil Storage Tank	50	Building 20
---	48	Aboveground Potassium Hydroxide Storage Tank	200	Building 20
---	49	Aboveground Potassium Hydroxide Storage Tank	120	Building 20
	FT20-51	Underground No. 6 Fuel Oil Storage Tank	30,000	Building 20
	FT20-61	Underground No. 6 Fuel Oil Storage Tank	30,000	Building 20
	FT20-71	Underground No. 6 Fuel Oil Storage Tank	30,000	Building 20
---	56	Aboveground Liquid Carbon Dioxide Storage Tank	1,850	Building 40
---	57	Aboveground Liquid Nitrogen Storage Tank	6,000	Building 40
034A	034A	Aboveground CIP 150 Tank (Caustic)	1,050	Building 40
035A	035A	Aboveground ProKlenz Two Tank (Corrosive)	1,050	Building 40

<sup>2</sup> Location subject to storm water plan guidance.

Note: Locations of most materials are presented on the facility map found in Appendix A.

**MATERIALS AND WASTE INVENTORY**  
(continued)

<b>PADEP Tank Number</b>	<b>GSK Tank Number</b>	<b>Material Description</b>	<b>Quantity Stored (Gallons)</b>	<b>Location</b>
---	---	Acetonitrile	Variable	Building 40
---	---	Liquid Oxygen Tank	11,000	Building 40
---	58	Aboveground Liquid Carbon Dioxide Storage Tank	1,850	Building 25
---	59	Cylinder Storage	Variable	Building 24
---	60	Solvent Vault	55-gal or Less	Building 25
---	61	Cold Room Solvent Storage	Variable	Building 24
---	62	Cold Room Solvent Storage	Variable	Building 24
---	63	Poisonous and Flammable Gas Storage	Variable	Building 24
---	64	Chemical Vault	Variable	Building 24
---	---	1,1,1,2 - Tetrafluoroethane	Variable	Buildings 3,4,5,20 and 28

Note: Locations of most materials are presented on the facility map found in Appendix A.

### 3.1.2 TRANSFORMER INVENTORY

PADEP Tank Number	GSK Transformer Area	Material Description	Quantity Stored (gallons)	Location
-----	65 <sup>1</sup>	Dielectric Fluid	310	Bldg 11
-----	66 <sup>1</sup>	Dielectric Fluid (6 transformers)	1,039 1,039 1,039 721 220 220	Bldg 14
-----	67 <sup>1</sup>	Dielectric Fluid	290	Bldg 15
-----	69 <sup>1</sup>	Dielectric Fluid (2 transformers)	1,001 1,001	Bldg 20
-----	70 <sup>1</sup>	Dielectric Fluid	420	Bldg 20
-----	71 <sup>1</sup>	Dielectric Fluid	1,957	Bldg 32
-----	72 <sup>1</sup>	Dielectric Fluid (2 transformers)	2,100 2,100	Bldg 36
-----	73 <sup>1</sup>	Dielectric Fluid (2 transformers)	650 650	Bldg 40

<sup>1</sup> **Location subject to 40 CFR Part 112**

Note: Some transformer areas contain more than one transformer. The quantity of fluid in each transformer is listed.

### 3.2 POTENTIAL SPILL VOLUMES AND RATES

Potential Situation	Volume Released	Rate of Spilling
Complete failure of a full tank	30,000 gallons	Instantaneous
Partial failure of a full tank	1 to 29,000 gallons	Gradual to instantaneous
Tank overfill	1 to several hundred gallons	Up to 5 gallons per minute
Failure of a pipe	Up to 15,000 gallons	Up to 5 gallons per second
Leaking pipe or valve packing	Several ounces to several gallons	Up to 1 gallon per minute
Tank car unloading activities	1 to several gallons	Up to 5 gallons per minute

### 3.3 MATERIALS COMPATIBILITY GUIDELINES

Many hazardous wastes and materials when mixed with other wastes or materials can produce effects that are harmful to human health or the environment, such as 1) heat or pressure, 2) fire or explosion, 3) violent reaction, 4) toxic dusts, mists, fumes or gases, or 5) flammable fumes or gases. The mixing of a Group A material with a Group B material may have the potential consequences noted.

#### **RCRA Chemical Waste Compatibility List**

Group 1-A	Group 1-B
Acetylene sludge	Acid sludge
Alkaline caustic liquids	Acid and water
Alkaline cleaner	Battery acid
Alkaline corrosive liquids	Chemical cleaners
Alkaline corrosive battery fluid	Electrolyte, acid
Caustic wastewater	Etching acid liquid or solvent
Lime sludge and other corrosive alkalies	Pickling liquor & other corrosive acids
Lime wastewater	Spent acid
Lime and water	Spent mixed acid
Spent caustic	Spent sulfuric acid
<b>Potential consequences: Heat generation; violent reaction</b>	

## MATERIALS COMPATIBILITY GUIDELINES

(Continued)

Group 2-A	Group 2-B
Aluminum Beryllium Calcium Lithium Magnesium Potassium sodium Zinc powder  Other reactive metals and metal hydroxides	Any waste in Group 1-A or 1-B
<b>Potential consequences: Fire or explosion; generation of flammable hydrogen gas</b>	

Group 3-A	Group 3-B
Alcohols Water	Concentrated Groups 1-A or 1-B Calcium Lithium Metal hydrides Potassium SO <sub>2</sub> Cl <sub>2</sub> , SOCl <sub>2</sub> , PCl <sub>3</sub> , CH <sub>3</sub> SiCl <sub>3</sub> Other water-reactive waste
<b>Potential consequences: Fire, explosion, or heat generation; generation of flammable or toxic gases</b>	

Group 4-A	Group 4-B
Alcohols Aldehydes Halogenated hydrocarbons Nitrated hydrocarbons Unsaturated hydrocarbons Other reactive organic compounds and solvents	Group 1-A or 1-B wastes Group 2-A wastes
<b>Potential consequences: Fire, explosion, or violent reaction</b>	

Group 5-A	Group 5-B
Spent Cyanide and Sulfide Solutions	Group 1-B wastes
<b>Potential consequences: Generation of toxic hydrogen cyanide or hydrogen sulfide gas</b>	

**MATERIALS COMPATIBILITY GUIDELINES**  
(Continued)

Group 6-A	Group 6-B
Chlorates Chlorine Chlorites Chromic Acid Hypochlorites Nitrates Nitric acid, fuming Perchlorates Permanganates Peroxides Other Strong Oxidizers	Acetic acid and other organic acids Concentrated mineral acids Group 2-A wastes Group 5-A wastes Other Flammable and Combustible wastes
<b>Potential consequences: Fire, explosion, or violent reaction</b>	

## 4.0 SITE RISK OVERVIEW

GSK has recognized that the potential for fire, explosion or hazardous material spills exists at the Upper Merion Township facility and that these releases can impact human health and the surrounding environment. To minimize the potential impacts caused by fire, explosion or spills, GSK has developed engineering controls, inspection/maintenance programs, and trained its personnel in safety and job awareness.

GSK has identified areas within its facility that present an increased risk for fire, explosion, or spills. These areas are:

- Aboveground/Underground Storage Tanks
- Loading/Unloading
- Waste Storage
- Bulk Chemical Storage
- Process/Manufacturing

Appendix A contains maps and site plans to specifically address controls with a few of these areas. Additionally, tables for Materials/Waste Inventories, Spill Potential, and Materials Compatibility have been included for emergency response and non-emergency response reference.

### 4.1 CONTAINMENT/CONTROLS

At all times, hazardous materials, wastes, and finished products are to be handled with great care on the property of GSK. At irregular intervals, however, spills or releases may occur, but these do not normally present any potential risk to human health or the environment. Mechanical and engineering controls allow for the containment, cleanup, and rapid removal of the spilled materials. Absorbents allow for easy containment and cleanup. GSK has developed spill control measures for the appropriate areas at the Upper Merion facility and they are presented below:

#### 4.1.1 Research and Development (R&D):

The potential spill areas for Research and Development operations include:

Loading docks

Drum storage

Aboveground storage tanks (AST)

Underground storage tanks (UST)

The loading dock areas have spill control materials available and are graded so that spilled material will remain in the loading area and not flow into storm sewers. All storm sewer culverts/drains are covered during unloading, loading, and spill episodes by drain and grate “quick covers.” The drum pad is diked, trenched, and has a sump. All other drum satellite accumulation areas are diked. All ASTs are contained and periodically an outside contractor performs ultrasonic gauge thickness testing on the metallic tank vessel walls. The sumps, trenches, and dikes are designed to contain a minimum of 110 percent of the total volume of

stored material (sufficient to contain the volume of the largest container plus an allowance for precipitation). The level of fuel oil in underground tanks is checked on a routine basis and any unexplained drop in level is reported to Environmental Manager, Environmental, Health, & Safety Department and investigated. All underground tanks are leak tested in accordance with applicable regulations.

#### 4.1.2 Waste Generation, Handling, and Disposal

Hazardous wastes are generated in laboratories, and support operations such as maintenance. The hazardous liquid waste generated in the laboratories is stored in small one- to five-gallon satellite containers, which are periodically poured into 55-gallon drums at designated waste consolidation areas. When full, the 55-gallon drums are moved to the 90-day drum storage pad. The 55-gallon drums are bulked into tank truck loads for offsite treatment and disposal. Lab pack chemicals are collected on a weekly basis, taken to Building 35, consolidated, and repacked for offsite disposal at permitted facilities.

Waste accumulating in the Building 4 150 gallon waste storage tank is transferred to 55-gallon drums which are also moved to the 90-day drum storage pad.

Wastes generated in support operations include oils and heat transfer fluids. These are collected in 55-gallon drums for disposal at offsite permitted facilities.

Sanitary water and industrial wastewaters are to the municipal sewer system. Refuse is collected in dumpsters and hauled offsite to a municipal waste incinerator or other approved facility.

Contaminated sorbent material is temporarily stored in the drum storage area prior to proper disposal.

#### 4.2 INCINERATOR FACILITIES

All three incinerators onsite are operated by trained personnel from contractor services (Sodexo) and are equipped with fire-prevention and lock-out devices. Floor plans of each incinerator facility, with the locations of fire-prevention devices, emergency exits, and related operational equipment are included in Appendix A. An example of the waste management procedures coordinated by contractor services for GSK is presented below.

Waste that is designated for incineration is transported from the research laboratories by contractor services in transport carts, which are segregated by building number to prevent mixing or contamination of waste streams. The waste is transported to the respective incinerators in contractor services trucks and processed in the incinerators upon arrival. The Building 26 Incinerator has a 24-hour waste storage area in the incinerator loading room and is equipped with an emergency device which trips the incinerator if a manual-pull fire alarm is activated. All three incinerators are equipped with flame safety sensors and have lock-out devices, which prevent waste loading until the proper temperatures are maintained in the secondary combustion chambers.

All wastes brought to the incinerator rooms are segregated and placed in sealed bags. It is inspected, weighed and documented before being fed into the incinerators. The contractor services operators and the automated incinerator control systems ensure that the operating temperatures of the primary and secondary combustion temperatures are maintained during processing. All incinerator ash is consolidated by contractor services personnel; laboratory tested, quarterly, at a minimum, and transported offsite to an approved disposal facility. No process water is generated in the Building 3, 21 and 26 incinerators.

#### 4.3 ADDITIONAL REQUIREMENTS - OIL/PETROLEUM BULK STORAGE

##### 4.3.1 Storage Tanks

As shown in the table (Materials/Waste Inventory) found in Section 3.1 of this Plan, 24 bulk storage tanks contain oil/petroleum products. GSK also has 16 oil-filled transformers of various sizes throughout the Upper Merion facility. Therefore, provisions have been made to minimize the potential for release of oil/petroleum materials to sewers and surface waters.

The materials of construction of all bulk oil storage tanks and related piping on the Upper Merion site are compatible with the oil stored and the specific pressure and temperature storage conditions. Venting capacity for all tanks is suitable for the fill and withdrawal rates, and there are no mobile or portable oil storage tanks on the Upper Merion site. All outside aboveground storage tanks (ASTs) with capacities of greater than 275 gallons are equipped with secondary containment dikes with containment volumes of 110 percent of the tanks' capacities unless noted. The diesel fuel tank located at Building 10 is double-walled. The caustic and acid tanks for Building 40 are double-walled and located indoors. An AST is located within Building 4 and spill control equipment is readily available to prohibit any spilled oil from spreading to other parts of the site. All ASTs with capacities of 500 gallons or greater are equipped with direct reading gauges or liquid level sensing devices. These devices are tested annually to ensure proper operation. Additionally, an outside contractor performs periodic, ultrasonic gauge thickness testing on the vessel walls of oil-filled ASTs with capacities of 500 gallons or greater. Tank supports and foundations are included in this inspection. High level, audible alarms are installed on all ASTs. All ASTs are examined weekly (see weekly inspection logs in Appendix G) for signs of deterioration and leaks by maintenance personnel.

All underground storage oil/petroleum tanks (USTs) are leak and pressure tested annually. The buried oil piping installation on Tank No. FT-5-1 is equipped with protective wrappings and coatings that are compatible with local soil conditions. Additionally, the following buried piping installations are cathodically protected: Tank Nos. FT-32-1, FT-20-51, FT-20-61, FT-20-71. There are no buried oil piping installations on the remaining tanks. The following No. 6 fuel oil USTs are equipped with internal heating systems: Tank Nos. FT-20-51, FT-20-61, FT-20-71 (hot water heated). There are no heating systems on the remaining tanks. The level of fuel oil in all USTs is checked on a routine basis and any unexplained drop in level is reported to Environmental Manager, EH&S and investigated.

Appendix B includes a table for 20-mile downstream notification if any oil/petroleum or hazardous substances enter surface waters. Storm sewers, creeks, streams, lakes, and rivers are

classified as surface waters. GSK currently stores only heating oil at its facility in large aboveground storage tanks which are not regulated.

#### 4.3.2 Transfer Operations

All ASTs have separate fill valves, and most fill valves are situated over the secondary containment dikes to collect any oil that may spill during the transfer operations. All transfer operations are observed by the oil tank truck driver and appropriate GSK personnel. Any malfunctions or abnormalities that may occur during transfer operations are immediately corrected by isolating the valve on the oil tank truck and mitigating any spilled oil. Standard oil transfer procedures assure that the oil tank truck does not depart before the transfer is complete and the hose is disconnected from the fill valve. Drains and outlets on oil tank trucks are examined for leakage prior to filling. All oil tank truck drivers are familiar with the locations of the aboveground piping installations, and warning signs are posted, as needed, to prevent vehicles from damaging aboveground piping.

GSK personnel utilize specially designed storm drain “quick-covers” to minimize the potential for oil products entering storm drains, culverts, and man-holes. Quick covers are stored in Building No 20 loading/unloading areas.

Some buildings do not have containment for fuel delivery trucks during transfer operations, and due to the location of the tanks, must implement specific practices to prevent oil releases from reaching nearby storm drains. GSK will utilize the following procedures for each indicated building during fuel transfer operations in addition to having trained, designated personnel in attendance during the deliveries.

##### Building 4

There are two ASTs located at this building on different sides of the building. One of the filling locations is by the loading dock, where there are no drains. However, this location is near a sloped driveway where fuel oil could flow downhill if there is a release from the fuel delivery truck. Trained, designated GSK personnel ensure that there is adequate spill equipment in the immediate vicinity during the fuel delivery operation to contain spills in this area. The other delivery location is on the other side of the building, where there is a fill port for an AST that is located inside the building; the fill port is located outside on a sloped driveway, and there is a storm drain approximately 100 yards downhill from the fill port. Trained, designated GSK personnel place storm drain covers on the down gradient storm drain prior to commencing fuel delivery.

##### Building 10

There are two ASTs located at this building, which are located outside, and near one another. The fuel delivery will occur in the flat area of the parking lot near the tanks which is located by a storm drain. Trained, designated GSK personnel place storm drain covers on the storm drain prior to commencing fuel delivery.

### Building 11

There is an AST associated with an EGEN at this building. The most practical location for filling this tank is by parking the delivery truck on the access road above the tank. Because this is an access road, it is not practical to close the road during fuel deliveries in order to place booms or temporary secondary containment for the fuel delivery truck. Therefore, the following practices are implemented for this location:

- Prior to commencing fuel delivery operations, trained, designated GSK personnel place storm drain mats on the storm drains down slope from the fuel delivery vehicle on the access road.
- Adequate spill equipment is maintained in the immediate vicinity during the fuel delivery operation to contain and/or divert spills from storm drains in the area

### Building 18

There is an AST associated with an EGEN at this building. The fuel delivery occurs in the driveway adjacent to the tank, and the area slopes towards a storm drain. Trained, designated GSK personnel place storm drain covers on the storm drain prior to commencing fuel delivery.

### Building 40

There are two ASTs associated with the two EGENs that are located at this building. The first AST where the fuel delivery operation occurs has approximately 6" curbs that would contain spills in the area and it slopes toward a storm drain. Trained, designated GSK personnel place storm drain covers on the storm drain prior to commencing fuel delivery. The second AST is double walled and the tank fill location is contained inside of the double wall of the AST.

#### 4.3.3 Facility Drainage

All drainage valves from diked containment areas of ASTs are manually activated and of open-and-closed design. The diked containment areas of ASTs are equipped with covers to minimize storm water accumulation in the containment areas. If storm water does accumulate in the containment areas, the condition of the storm water is inspected for evidence of oil before the water is drained through the valves. For all AST containment areas, the drainage valves are always in the closed position and the opening and resealing of the drain valves is conducted under responsible supervision. If there is evidence of oil in the collected storm water, the effluent is sampled to ensure compliance with applicable water quality standards before the water is drained from the containment areas. If the sampled effluent is unacceptable, the water is pumped out of the containment area for proper treatment and disposal.

#### 4.4 INSPECTIONS

Inspections are performed by supervisors and operators as part of Facility Good Manufacturing Practices. Any abnormalities identified during the inspection are noted and evaluated for further action. In addition, contractor services perform weekly inspections, which include the use and storage of safety equipment, chemical segregation and compatibility, and manufacturing equipment and procedures.

Contractor services also inspects solvent and aqueous waste tanker unloading areas, tank areas, and drum storage areas on a weekly basis for leaks and spills.

Inspections are performed at least weekly and more frequently if deviations from this Plan are identified when a spill occurs. Inspections are performed by the Environmental Manager, of the Environmental, Health, & Safety Department or a designee who has been trained in both the hazards associated with the management of any and all solvents and hazardous waste products used or generated at the site as well as the details of this Plan, and the applicable regulations. The inspections include each solvent vault and drum storage area. Conditions that do not comply with the state and federal regulations are noted on an inspection form (Refer to Appendix G) and reported to the appropriate department Manager, who initiates steps to correct the problem.

Uncontrolled spills are managed immediately, and the sequences of actions detailed in the appropriate section of this ICP are implemented. The following items are checked closely during the inspections:

- Hazardous Waste Inventory - An inventory of drummed hazardous wastes is maintained that notes location and content.
- Testing and Maintenance of Equipment - All fire protection and spill control equipment, including an adequate supply of absorbent and tools such as shovels, brooms, pumps, and hoses with a water supply, are inspected and maintained to ensure proper operation in time of emergency. All waste containers are visually checked for signs of corrosion, damage, swelling, or leakage. Any drum found to be leaking or severely corroded is replaced with a drum that is in good condition. Any spills that have occurred are quickly absorbed and the resulting mixture is shoveled into a drum that is in good condition for appropriate disposal.
- Aisle Space - Sufficient aisle space is allowed for the unobstructed movement of personnel and fire and/or spill control equipment into the area designated for hazardous waste storage.
- Security - All waste containers are located in designated storage areas. Waste-containing drums are not stored outside the designated protected area. All fencing is in proper repair and equipped with locks. Under no circumstances will any containers of hazardous waste be allowed beyond the fenced-in areas. The immediate areas are accessed by properly authorized personnel.

- Labeling - All drums of hazardous waste are clearly marked with the date that generation occurred and storage commenced. Additionally, each drum is labeled with the Department of Transportation (DOT) proper shipping name and the appropriate hazard class of the waste. Prior to the shipment of hazardous wastes from the site, all drums meet the packaging, labeling, marking, and placarding as noted in Pennsylvania Hazardous Waste Regulations (Title 25, Chapters 262a and 265a).
- Incinerator Facilities - All three incinerators and related operational equipment are cleaned and inspected by contractor services personnel every day of incinerator operation. Maintenance and incinerator room cleaning logs are kept for each incinerator. Shovels, mops, buckets and other spill control and cleaning equipment are kept in each incinerator room. Proper access ways for unobstructed movement of emergency response personnel are maintained in each incinerator room.

#### 4.5 MAINTENANCE

The GSK preventive maintenance program and security is a combination of services provided by outside contractors. Below are a summary of the various preventive maintenance program elements and the frequency of inspections. During the inspection and testing of the safety systems, all required equipment adjustment, repairs, or replacement of parts shall be documented and maintained onsite.

It shall be the policy at this site that any employee noticing a dangerous or potentially dangerous situation shall report it to his/her supervisor for corrective action. All preventive maintenance and testing shall be conducted through Maintenance. All incinerators and related equipment are maintained by Contractor Services.

Additional preventative maintenance measures include:

- Ensuring that there is sufficient spill control equipment, including an adequate supply of absorbent and tools such as shovels, brooms, pumps, and hoses with a water supply to ensure proper operation in time of emergencies.
- Conducting annual calibration checks of critical safety systems to ensure the accuracy and reliability of instruments affecting process measurement and control.

#### 4.6 HOUSEKEEPING

Individual supervisors within the laboratory, manufacturing, storage, maintenance, and office areas are responsible for promoting good housekeeping practices among their employees to minimize the likelihood of accidental spills or hazardous incidents. Examples of good housekeeping practices employed at the site include, but are not limited to, the following:

- Neat and orderly storage of chemicals and raw materials

- Prompt removal of small liquid spillage
- Regular refuse pickup and disposal
- Maintenance of proper spacing for pathways and walkways between containers and drums in storage areas
- Prompt removal of dry chemical spillage to prevent possible washdown to drains and drainage ditches or windblowing of the material to other areas of the plant
- Daily in-house cleaning of laboratory, manufacturing, and storage areas
- Maintenance of clean floors in all areas of the site
- Removal of flammable and combustible waste materials and residues from laboratories and buildings on a regular basis and their placement in suitable storage receptacles
- Maintenance of clean incinerator facilities and related transport and operational equipment

#### 4.7 SECURITY

There are three points of entry into the Upper Merion site, which is surrounded by cyclone fencing. Two driveways enter from Swedeland Road and one enters from River Road. All gates have a security guard during office hours to control truck and auto traffic. After business hours, all gates are locked except one and site patrols are started at 4:30 p.m. and continue until 8:45 a.m. Employees must present a pass to the guard or use the pass, which has a magnetic code, to open the pedestrian gate. All building access doors that are not supervised by security personnel are supposed to be locked at all times. Access is restricted to authorized personnel with an appropriate magnetic coded pass. The pass allows employees and other personnel to only access areas that they have been authorized to enter. All visitors must sign a log and be accompanied by an employee to any point onsite beyond the receptionist's desk, or points manned by the guards. A closed-circuit television monitoring system operates 24 hours a day.

Lighting is adequate throughout the site. Signs that pertain to chemical handling, storage, and personal safety are posted throughout the site. The drum storage pad is fenced and can be locked. When a truck comes to pick up waste materials, it is checked by a guard and directed to the correct area.

#### 4.8 EXTERNAL FACTOR PLANNING

The effects of a power outage, strike, or snowstorm would be minimal to the site's raw material, waste, and oil/petroleum handling procedures and storm water management practices.

There are emergency electric generators available to allow high priority operations to continue in the event of a power failure.

Sabotage during a strike is always possible, but the normal security procedures should be a sufficient deterrent. Strikes are not common due to the absence of a union.

Problems associated with rainwater and flooding and a severe snowstorm are minimized because of the preparedness, prevention, and contingency measures that have been developed and implemented in accordance with this ICP. These measures should be able to handle most storm events that typically occur in this area.

Other external forces such as lightning or earthquakes could have serious implications. If fires are caused by any of these events, the Automatic Fire Alarm (AFA) system would be activated and all appropriate notification procedures identified in this ICP would be implemented. Damage due to earthquakes is not expected since major earthquakes are not typical for Southeastern Pennsylvania.

#### 4.9 FIRE PREVENTION

Employees of the Upper Merion site shall only extinguish incipient stage fires as described by OSHA Standard 1910.155(c)(26). The supervisory staff, emergency response personnel, Maintenance personnel, and Security personnel shall be trained to control these fires in their normal work areas.

If the fire equipment will not contain and suppress the fire or if toxic fumes are being generated, then the employees are required to evacuate the area.

The local fire department is responsible for suppressing all fires beyond the incipient stage. Due to this responsibility, the Upper Merion site maintains a relationship with the Swedeland Fire Department. The site's layout, potential hazards, materials, and available fire-fighting equipment is available to the Fire Department.

The Upper Merion facility interacts with the Swedeland Fire Department and the local Fire Marshal's office periodically and conducts a simulated fire, rescue, and emergency aid drill and a site familiarization tour. The Fire Marshal's office is updated on any changes made at the Upper Merion facility pertinent to its functions.

## 5.0 INTEGRATED CONTINGENCY PLAN REVISION

This Integrated Contingency Plan (ICP) was originally developed in March 1999. Subsequent revisions to this plan are presented in Appendix F. This Plan will be revised if:

- Regulatory changes dictate
- Key personnel changes occur
- Structural or design modifications to the facility increase the risk potential to human health or the environment
- The Plan fails during an emergency situation

The persons listed in the following table are responsible for developing, implementing, and maintaining the ICP for GSK. They will have support from individual Emergency Response Managers and Coordinators but will be the individuals who coordinate all ICP activities.

Name	Title	Department	Phone Number	
			Work	Pager
Ms. Deanna Herman	Environmental Manager	EH&S (R&D)	610-917-7343	484-571-4644
Mr. Richard Rebar	Director, Hazardous Substance Control and Governance	EH&S (R&D)	610-270-7936	484-571-1059

Their main responsibilities as ICP Coordinators are:

- Identification of materials and wastes handled (materials inventory)
- Identification of potential spill sources (risk assessment)
- Establishment of spill-reporting procedures
- Visual inspection programs
- Review of past incidents and spills, and countermeasures utilized
- Establishment of training and educational programs
- Periodic review and evaluation of the ICP
- Institution of appropriate changes at regular intervals
- Review of new construction and process changes at the facility relative to the ICP
- Evaluation of the effectiveness of the overall ICP and recommendations to Senior Management on related matters.

## **SECTION II (CORE PLAN)**

## 6.0 SPILL CLASSIFICATION

GSK has designated spill classifications for its Upper Merion site. Based on the spill classifications, procedures have been identified to determine the necessary level of response by personnel. Classification assists in determining the degree of response, equipment, and outside rescue services necessary. It will also determine which agencies require notification.

### **MINOR SPILLS:**

Minor spills are those that can typically be controlled by the application of absorbent media in sufficient quantity to contain the release. Examples of minor spills are spills from a broken small container, material dripping from a valve or hose that is used to transfer materials from one location to another.

In most cases, these releases can be controlled by the application of absorbent media in sufficient quantity to contain the release. Minor spill incidents in which contaminants are not released into the environment and do not represent an immediate hazard to human health or the environment can be addressed by:

#### **Process Areas**

- Confirm drains are unclogged and that spilled materials are directed to storage tanks.
- Wash spilled materials into containment drains using sufficient amounts of water to thoroughly remove the spill.

#### **Laboratory Areas**

- Contain the spill using absorbent media or chemical neutralizer.
- Use appropriate clean-up tools and equipment to clean up the materials and deposit into appropriate waste containers.
- Restock expended spill control resources.

\*NOTE: Personnel shall notify other employees of potential dangers. Supervisors shall be notified of the situation and personnel shall wear appropriate safety apparatus (chemical resistant boots, gloves, clothing, and SCBA).

### **MAJOR SPILLS:**

Major spills are those that will threaten the environment or represent a hazard to human health. Examples of major spills are those that result due to the rupture of a storage tank, the breaking of valve or transfer line, major damage to a containment area, etc. When a major spill occurs that may threaten the environment and/or present a hazard to human health, the following procedures must be followed:

- Call Security at extension 5555 and they will notify the Site Incident Commander(s) of the situation, and other appropriate site officials (i.e., Safety).

- Notify the appropriate state and local emergency response agencies. Appendix B lists appropriate agency phone numbers. Section 7.0 presents appropriate regulatory notifications.
- Ensure reasonable measures so that fires, explosions and/or releases do not occur, recur, or spread to other hazardous chemicals.
- Monitor the affected equipment and area for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever appropriate.

#### **NON-SUDDEN SPILLS:**

Non-sudden releases are those not immediately recognized and have, in most cases, occurred over a period of time prior to being detected. Potential sources for this type of release are the underground aqueous storage tanks, fuel tanks, and associated piping. The detection of a slow release of petroleum products or hazardous waste contaminants shall result in the following contingency plan:

- Initiate and coordinate the appropriate remedial action.
- Verify the initial findings.

## 7.0 REGULATORY AGENCY NOTIFICATION

In the event that a release results in contamination of the soil, sewer, surface water, or ambient air, the Pennsylvania Department of Environmental Protection (PADEP) will be notified. Departments or offices of specific importance have been listed below. Specific phone numbers may be referenced in Appendix B, which contains the various notification lists.

- Regional Office 24 Hour Number
- Back-up Emergency Numbers
- Waste Management Program
- Water Management Program
- Air Quality Program
- Environmental Clean-up (Includes Storage Tanks)

If the Site Emergency Coordinator(s) determines that evacuation of local areas is advisable because an emission, discharge, fire, or explosion could pose a threat to human health or the environment by an offsite release of a reportable quantity of any hazardous substance, extremely hazardous substance, or CERCLA hazardous substance, the agencies listed below will be notified. Even if a significant release of a hazardous substance occurs below the reportable quantities that has the potential to contaminate the soil, sewer, surface water, or ambient air, GSK will also notify the agencies listed below.

- Upper Merion Township Fire Marshal (Local)
- Montgomery County Offices of Emergency Preparedness (County)
- Montgomery County Health Department (County)
- Pennsylvania Emergency Response Commission (State)
- Pennsylvania Emergency Management Agency (State)
- National Response Center (National)

If a release involves a spill into the sanitary or storm water sewer systems, the following agencies will be notified:

- Pennsylvania Fish and Boat Commission
- Upper Merion Township Wastewater Treatment Plant
- Pennsylvania Fish Commission

Lists of appropriate agencies and their corresponding phone numbers have been detailed in Appendix B of the ICP.

The names and quantities of hazardous substances, extremely hazardous substances, and CERCLA hazardous substances stored and used at this site and that must be reported to the agencies are listed below. This listing is based on the maximum, onsite material inventory from the Materials/Waste Inventory, and the possibility of exceeding threshold reporting quantities of SARA Section 302 Extremely Hazardous Substances, Section 304 Extremely Hazardous

Substances, and CERCLA Hazardous Substances. However, if a significant release of a hazardous substance occurs below the reportable quantities listed below that has the potential to contaminate the soil, sewer, surface water, or ambient air, GSK will also notify the agencies listed previously and in Appendix B.

Tank or Identification Number	Material Description	Reportable Quantity (lbs.)
033A	Sulfuric Acid	1,000
	Formaldehyde (as Formalin)	100

Reference: Comprehensive Environmental Responses, Compensation, and Liability Act (CERCLA Section 101(14)).

The following charts have been included as an easy reference for guidance to emergency notifications. The charts have been broken down into three specific emergency scenarios:

- Fuel Oil Spill Scenario
- Hazardous Waste Spill Scenario
- CERCLA Hazardous Substance Notification

Appropriate notifications procedures for Upper Merion Personnel are addressed in Section 8.0 - Initial Response.

In the event of a spill into the sanitary or storm water systems, the following notifications must be made in the following sequence:

- |   |  |
|---|--|
| 1. Upper Merion Collection Systems Department   | 610-275-1534 (6:00 AM - 2:30 PM)<br>610-265-3232 (after hours)                       |
| 2. Upper Merion Wastewater Treatment Facility (Matsunk Plant)                                   | 610-275-0688 (7:00 AM - 3:30 PM)<br>610-265-3232 (after hours)<br>610-275-1604 (fax) |
| 3. Upper Merion Township Municipal Industrial Pretreatment Program Janet Serfass, Administrator | 610-205-8506 (8:00 AM - 5:00 PM)<br>610-721-0075 (Emergency)                         |
| 4. Pennsylvania Fish Commission   | 717-626-0228   |

A written report will be submitted to the MIPP Administrator's attention within 5 days after an accidental discharge. A copy of this memo will be posted in the EH&S Office, Pretreatment Plant, and the wastewater log book. This memo will also be posted in Building 40.

7.1 NOTIFICATION CHART - FUEL OIL SPILL

Fuel Oil Spill Scenario	Clean Water Act	EPA SPCC Regulations
<b>Any quantity to storm sewer or water.<sup>3</sup></b>	<p><b>Immediately</b> call Regional DEP Office @ 484/250-5900<sup>1</sup></p> <p><b>Immediately</b> call Montgomery County Offices of Emergency Preparedness @ 610/278-5117</p> <p><b>Immediately</b> call Pennsylvania Emergency Management Agency @ 717/783-8150</p> <p><b>Immediately</b> call the National Response Center @ 800/424-8802</p> <p><b>Within 2 hours</b>, notify downstream water companies, municipalities, and industrial users within 20 miles as warranted.<sup>2</sup></p>	No notification requirement, however, if spill is 1,000 gallons, or two spills of more than 42 U.S. gallons occurred in past 12-months, than report must be submitted within 60 days per 40 CFR Part 112.4
<b><i>When fire, explosion or safety hazards exist</i></b>	<p><b>Immediately</b> call the Upper Merion Fire Department @ 610/265-5533 or 911</p> <p><b>Immediately</b> call the Upper Merion Police Department @ 610/265-3232 or 911</p>	

<sup>1</sup> Reporting requirement under PA Title 25 Chapter 101.2 is fulfilled by this notification requirement

<sup>2</sup> See Appendix B of this Plan for Downstream Notification List

<sup>3</sup> Reporting requirement if spill is 1,000 gallons, or two reportable spills of more than 42 gallons in each of two discharges have occurred in past 12-months. This report must be submitted within 60 days per 40 CFR 112.4

## 7.2 NOTIFICATION CHART - HAZARDOUS WASTE SPILL

Haz Waste Spill SCENARIO	PADEP Hazardous Waste Regulations	Clean Water Act & CERCLA
<b>Release to storm sewer, surface water, or soil.</b>	<p><b>Immediately</b> call Regional DEP Office @ 484/250-5900;            If CERCLA reportable quantity (40 cfr 302), <b>immediately</b> call:</p> <ul style="list-style-type: none"> <li>- Montgomery County Offices of Emergency Preparedness @ 610/631-6500</li> <li>- Pennsylvania Emergency Management Agency @ 717/651-2001</li> </ul> <p><b>Within 2 hours</b>, notify downstream water companies, municipalities, and industrial users within 20 miles as warranted.<sup>1</sup></p>	If CERCLA reportable quantity (40 CFR Part 302), immediately call the National Response Center @ 800/424-8802
<b><i>When fire, explosion or safety hazards exist...</i></b>	<p><b>Immediately</b> call the Upper Merion Fire Department @ 610/265-5533 or 911  <b>Immediately</b> call the Upper Merion Police Department @ 610/265-3232 or 911</p>	

<sup>1</sup> See Appendix B of this Plan for Downstream Notification List

### 7.3 NOTIFICATION CHART - CERCLA REPORTABLE QUANTITY

CERCLA Spill Scenario	Clean Water Act & CERCLA
<b>Release to storm sewer, surface water, or soil of CERCLA Reportable Quantity</b>	<p><b>Immediately call:</b></p> <ul style="list-style-type: none"> <li>- Regional DEP Office @ 484/250-5900;</li> <li>- Montgomery County Offices of Emergency Preparedness @ 610/631-6500</li> <li>- Pennsylvania Emergency Management Agency @ 717/651-2001</li> <li>- National Response Center @ 800/424-8802</li> </ul> <p><b>Within 2 hours</b>, notify downstream water companies, municipalities, and industrial users within 20 miles as warranted.<sup>1</sup></p>
<b><i>When fire, explosion or safety hazards exist...</i></b>	<p><b>Immediately</b> call the Upper Merion Fire Department @ 610/265-5533 or 911</p> <p><b>Immediately</b> call the Upper Merion Police Department @ 610/265-3232 or 911</p>

<sup>1</sup> See Appendix B of this Plan for Downstream Notification List

## 8.0 INITIAL RESPONSE

### 8.1 NOTIFICATION OF SITE INCIDENT COMMANDER

- (1) In the event of fire, explosion, significant chemical or waste spill, or other immediately dangerous to life situation requiring evacuation:
  - a. Pull the fire alarm and evacuate the area, and/or
  - b. Phone ext. 5555 for Security to evacuate the facility.
  - c. Disclose the following information to Security:
    - name of caller
    - type of emergency
    - location (building number, floor #, etc.)
    - person(s) involved
- (2) In the event of other emergency situations:
  - a. Notify Security (dial ext. 5555)
  - b. Identify and characterize the incident
  - c. Disclose the following information to Security:
    - name of caller
    - type of emergency
    - location (building number, floor #, etc.)
    - person(s) involved
    - type of assistance required
- (3) In the event of personal injury:
  - a. Notify Security (dial ext. 5555),
  - b. Security will immediately call for an ambulance or medical assistance (as appropriate)
  - c. Disclose the following information to Security:
    - name of caller
    - condition of injured person(s)
    - resources required
    - location (building number, floor #, etc.)
- (4) When contacted, Security shall:

- a. Check evacuation status, if necessary
  - b. Contact the appropriate Incident Commander, Emergency Response Team Members and Key Site Managers, as needed.
  - c. Establish communications between the appropriate organizations.
- (5) In the event that the health of the community or the environment OUTSIDE THE FACILITY is potentially affected, the Incident Commander shall establish communications with local police, fire, and/or other federal, state, or local emergency organizations. Refer to Appendix B for appropriate notification listings and emergency contacts.
- (6) In the event of a hazardous material release, the Incident Commander and Emergency Response Team shall:
- a. Determine the extent and nature of the spill
  - b. Review Sections 7.1, 7.2, 7.3, and Appendix B to determine if the spill or release should be reported, and if required, who should be contacted and notified of the release
  - c. Contain and clean up the spill (if safe to do so) following proper procedures and guidelines
  - d. Dispose of waste material according to established regulations and corporate guidelines
  - e. Clean and prepare emergency equipment for reuse
  - f. Keep communication flow by means of internal procedures presented in the Hazardous Material and Emergency Response Manual.
- (7) The designated Incident Commander shall investigate the incident and notify regulatory agencies, when appropriate, but within 15 days or quicker if required.
- (8) The designated Incident Commander shall arrange for the initiation of corrective actions to prevent similar future incidents with the appropriate site personnel.

SITE INCIDENT COMMANDERS			
NAME	ADDRESS	PHONE NUMBERS	
		WORK	CELL
Ms. Deanna Herman	377 Golf Course Rd. Birdsboro, PA 19508	610-917-7343	484-571-4644
Mr. Richard Rebar	1021 Ridgheaven Road West Chester, PA 19382	610-270-7936	484-571-1059
ALTERNATE EMERGENCY COORDINATOR			
Jennifer Read		610-270-4292	610-322-2088
Leo Foley		610-270-7854	484-571-4643

## 8.2 INCIDENT COMMAND SYSTEM (ICS):

GSK has developed an Incident Command System (ICS). This system designates qualified personnel to assume responsibility during an emergency situation (fire, explosion, spill, or catastrophic failure). At all times, there will be at least one person either on the premises or “on-call” with the responsibility for coordinating emergency response measures. The Incident Commander (IC) shall receive direct support from Emergency Response Managers, Specialty Teams, and Emergency Response Teams (ERTs). Each person involved in the emergency response effort shall be familiar with all aspects of the plan, location of records, and facility layout. The acting Site Incident Commander shall have full authority to commit the resources, including equipment, tools, personnel, contractors, and agencies, to carry out the provisions of this plan.

Appendix C contains a diagram of Incident Command System and discusses the duties/responsibilities of each member.

## 8.3 SAFETY AND SECURITY

GSK recognizes the importance of employee protection; therefore, during emergency response activities, whether a result of fire, explosion, or spill, GSK may conduct periodic air monitoring within the emergency area. The purpose is to identify and quantify potential airborne contaminants.

Monitoring is performed to evaluate possible evacuation procedures as well as to determine the appropriate level of personal protection. Monitoring can be performed using direct or indirect measurement methods.

Monitoring may also be used to determine site work zones.

During a site emergency response activity, whether it be fire, explosion, or spill related, issues of

cross-contamination of workers, equipment, tools, and the facility shall be addressed. To do this, GSK has established specific site control procedures limiting the spread of contaminants called “work zones.” Work zones ensure:

- personnel are properly protected against the hazards present where they are working,
- work activities and contamination are confined to appropriate areas,
- personnel can be located and evacuated in an emergency.

Although there is no set limit to zone control or the number of zones, this plan shall discuss three:

- Exclusion or “HOT” Zone - the following activities are characteristic of this zone activity.
  - mapping, sampling, photography, and surveying
  - monitoring device installation (wells, perimeter monitors, etc.)
  - clean-up work, packaging of wastes, labeling, excavation.

This zone will present workers, and responders with the highest level of exposure and risk. The boundary of this zone is represented by the “Hot-Line.”

- Contamination Reduction or “WARM” Zone (CRZ) - This zone is represented by a reduced exposure risk and is the transitional area between the contaminated and clean areas. The warm zone is generally recognized as the decontamination area or area where personnel, tools, equipment, and heavy equipment are cleaned. The CRZ is characterized by:
  - decontamination of equipment and personnel
  - support area for first aid, removal of injured, resupply of equipment, etc.
  - sample preparation
  - wash and toilet facilities for responders
- Support or “COLD” Zone - This zone is characterized by administrative and other support functions. This area is a safe zone with very low risk of exposure. Personnel within this zone may wear normal work clothing.

Zone control boundaries shall be established prior to commencement of clean-up or control activities. It shall be the duty of the Safety Department to regulate and monitor potential exposures throughout the emergency response if applicable. When establishing zone control, consider factors such as:

- Accessibility
- Resource availability
- Visibility (Line-of-Sight)
- Wind direction/weather conditions
- Distance

\* Refer to Subsection 11.1 for specific levels of decontamination specific to the response activities.

Site security is necessary to:

- Prevent unauthorized, unprotected exposure to non-emergency response personnel.
- Maintain traffic coordination for response equipment.
- Prevent response activity disruption.
- Prevent theft.

Safety/security concerns shall be addressed using signs, barricades, caution tape and cones. Personnel shall be aware of these warning indicators and abide by them. Upon completion of the response activity, the Site Incident Commander shall designate a response termination and the removal of the safety equipment.

## 9.0 EMPLOYEE RESPONSE

It is the responsibility of every manager, supervisor, and employee to maintain a continuous and unobstructed means of exit from any point within the building to a safe location outside the building or work area. Supervisors and managers are also responsible for ensuring that employees in their areas are knowledgeable in building evacuation procedures.

Under no circumstances are personnel to return to the evacuated building unless the Site Emergency Coordinator(s) or a member of the Environmental, Health, & Safety Department has authorized re-entry.

Upon hearing an alarm, all personnel shall:

- Secure work station and activities.
- Close laboratory/office doors.
- Proceed/exit facility at nearest exit.
- Report to assembly area (Do not use elevators).
- Associate Building Emergency Coordinator(s) shall check enclosed spaces to verify all personnel have evacuated.

Once assembled, each supervisor shall:

- Receive the reports of Building Emergency Coordinator's regarding the evacuation of their area.
- Report findings to Emergency Response Personnel who shall report to Site Incident Commanders.

The Site Incident Commander shall:

- Report missing personnel to local fire and rescue services.

### Visitors

It is the responsibility of each visitor's host to assure that his or her guest(s) is escorted to the safe evacuation and assembly area.

GSK employees from other onsite locations are to follow the evacuation procedure for the area they are visiting.

### Rescue Operations

Generally, rescue functions will be conducted by the public fire and rescue units. Employees should not attempt rescues when such action would place them at risk.

Supervisors and Associate Building Emergency Coordinators are to check their areas for individuals requiring assistance as they are leaving the building.

### Outside Contractors

When an evacuation alarm is initiated, all outside contractors shall report to the applicable evacuation assembly area. It is the responsibility of each contractor's senior employee to take attendance and to ascertain that all of his/her contract employees are safely evacuated. The various contractors' representatives will then inform their hosts or Security of the status of their employees.

Contractors are responsible for ensuring that their employees remain in the applicable assembly area until otherwise instructed.

Evacuation procedures shall be communicated to contractors by their hosts in accordance with existing company procedures given in the Site Regulations for Contractors booklet.

### Handicapped Individuals

If an employee is physically unable to walk down stairs, the supervisor shall establish a "buddy system" with other employees as soon as the handicapped individual reports to work. The "buddy" is to assist the handicapped individual in getting out of the building during an emergency evacuation. Safety and Security are notified of these individuals by Human Resources upon their initial assignment.

The Building Emergency Coordinators shall be aware of all handicapped individuals in their area and check to assure they are evacuated during an emergency.

During the off-shifts (after 5:00 PM and weekends), individuals unable to walk down stairs must follow the requirements of the "Working Alone" procedure.

They must "check out" with Security when they leave the site.

When a handicapped visitor comes into a laboratory, the host should inform the area supervisor so assistance can be assigned to the visitor if an emergency evacuation is implemented. The visitor would be taken to the nearest fire exit.

### Critical Operations Shutdown

A determination shall be made as soon as possible by the Department Director or the appropriate manager/supervisor as to whether any critical operations exist. For an operation to be considered critical, its disruption must either:

- Create an unusual hazard, or
- Cause an extraordinary loss of company assets or future earnings.

Persons responsible for critical operations that ordinarily would be shut down during an emergency may seek special approval from the Site Incident Commander(s) for continuation of these operations or to re-enter the area should an emergency occur. However, under no circumstances is anyone to take any personal risk.

## 10.0 SUSTAINED RESPONSE CLEANUP

GSK realizes that most spill incidents are able to be handled by a few individuals within its organization without implementing an intensive response under the ICP. GSK also recognizes that during a prolonged mitigation, "in-house" resources and personnel may become limited or exhausted. Therefore, GSK has made arrangements with outside contractors to provide personnel, equipment, and tools to supplement its efforts. Additionally, GSK has developed a commercial resources/services directory to provide everything from catered food to cranes and lumber.

Environmental contractors can respond to emergency spills within 3 hours and shall be prepared to handle and provide a full-service response that includes transportation and disposal. Appendix C provides reference tables for environmental contractors and commercial resources.

### 10.1 PERSONAL PROTECTIVE EQUIPMENT

GSK requires any employee who responds to or in support of activities that involve known or suspected environmental contamination to properly wear personal protective equipment (PPE). PPE shall be selected based on the potential for contaminant exposure(s) as detected using direct-reading monitoring devices and based on the knowledge of the responder. At a minimum, Level B PPE will be used initially until the appropriate person has determined that a lower level of protection is adequate. Conditions requiring use of PPE may involve one or more of the following conditions:

- chemical spill or release involving liberation of vapor, fume, gas, or suspended particulate
- fire or smoke
- splash or skin-contact/absorption hazard

The specific levels of protection and necessary components for each have been divided into four categories according to the degrees of protection afforded:

- Level A: Should be worn when the highest level of respiratory, skin, and eye protection is needed. Level A will be used only by highly trained Haz Mat Technicians. Examples of chemicals requiring Level A include hydrogen cyanide, hydrogen chloride, and anhydrous ammonia. At this time GSK does not use or have the capability to use Level A PPE.
- Level B: Should be worn when the highest level of respiratory protection, but a lesser level of skin protection is needed.
- Level C: Should be worn when the criteria for using air-purifying respirators are met, and a lesser level of skin protection is needed.
- Level D: Level D Provides minimal protection against chemical hazards. It is normally worn only as a work uniform and not in any area with significant respiratory or skin contact hazards. Level D Modified should be worn when respiratory protection is not warranted but extra dermal or clothing protection is necessary.

Modifications of these levels are permitted and routinely employed during site work activities to maximize efficiency. Likewise the type of chemical protective ensemble will depend upon contaminants, concentration, and extent of contact.

The Level of Protection selected is based upon the following:

- Type and measured concentration of the chemical substance in the ambient atmosphere as well as its toxicity
- Potential for exposure to substances in air, splashes of liquids, or other direct contact with material due to work
- Knowledge of chemicals onsite along with properties such as toxicity and route of exposure
- Understanding of chemical, physical, and biological hazards that may be encountered

In situations where the type of chemical, concentration and possibilities of contact are not known, the appropriate Level of Protection will be selected based on professional experience and judgment of the Incident Commander and the EH&S Industrial Hygiene Staff until the hazards can be better identified.

### **Description of Personal Protective Equipment**

#### **Level A Personal Protective Equipment**

Only specially trained and qualified individuals will don Level A. At this time, GSK personnel are not trained to use Level A PPE.

#### **Level B Personal Protective Equipment**

1. Positive pressure demand, full facepiece self-contained breathing apparatus (SCBA), or positive pressure demand supplied-air respirator, with escape SCBA (NIOSH/MSHA approved)
2. Saranex® coated Tyvek®, Tychem®, Chemrel®, Tyvek®, QC or other equally protective outer suits with connected hoods and booties
3. Outer gloves, chemical-resistant
4. Inner gloves, latex or nitrile surgical type
5. Boots - Steel toe
6. Boot Covers (outer) – Latex (disposable) or slush boots (reusable)

#### **Level C Personal Protective Equipment**

1. Respiratory Protection - Air-purifying respirator, full-face, cartridge-equipped organic vapor/acid gas/HEPA filter cartridge.

Note: Half-face respirators may be used by equipment operators if it is determined that visual

acuity is of more concern than respiratory protection. Safety glasses or goggles will be worn if half-face respirators are donned.

2. Pro/Shield 2 or 3, Tyvek, Tyvek QC coveralls with attached hoods
3. Outer gloves, chemical-resistant
4. Inner gloves, latex or nitrile surgical type
5. Boots - Steel toed
6. Boot covers (outer) - Latex (disposable) or slush boots (reusable)

#### Level D Modified

1. Pro/Shield 2 or 3, or Tyvek suits
2. Outer gloves, chemical-resistant
3. Inner gloves, latex or nitrile surgical type, if necessary.
4. Boots - Steel toe
5. Safety glasses or goggles

#### Level D

1. Work uniform (cloth coverall, long sleeve)
2. Boots - Steel toe
3. Chemical splash goggles or safety glasses with side shields as appropriate when splashes may occur.

Additional Personal Protective Equipment (optional to be specified by the Incident Commander, as needed)

1. Warning vests
2. Fall protection devices
3. Hearing protection
4. Chemical splash goggles or safety glasses with side shields as appropriate when splashes may occur
5. Appropriate cool vests and/or other heat reducing devices may be worn to prevent heat stress.
6. Hard hat
7. Inner Pro/Shield 2/3 or Tyvek coveralls with Levels A, B, or C

## 11.0 RESPONSE TERMINATION/REPORTING

Termination of a spill or response at GSK shall be designated by the acting Site Incident Commander. Under his/her direction, the facility shall systematically be restored to normal operating activities. Declaring the site safe and terminating the response requires the following:

- Equipment, tools, vehicles, personnel, and personal protective equipment have been organized and decontaminated.
- Spilled materials or wastes have been packaged, labeled, and prepared for disposal.
- Spill areas and adjacent locations have been monitored for residual fumes, vapors, or gases.
- Safety barriers, caution tape, and signs have been removed.
- Response personnel have received medical check-ups.
- Business recovery activities have begun.

Additional follow-up reporting to agencies shall be documented within 15 days of the conclusion of the emergency response. Reports shall be distributed to appropriate governing agencies and internal GSK organizations. A detailed site report form is located in Appendix D.

Appendix F contains an ICP Modification Questionnaire. This questionnaire should be used to identify problems associated with the response and the execution of the ICP.

The Emergency Response Team will continue operations until the emergency is abated or until otherwise relieved by the local Fire Department or other emergency response organization. However, such relief will occur only upon consultation and agreement of the Incident Commander.

An “emergency” is considered to have ended when the following criteria have been met:

- The release, discharge, or leaking of the chemical materials has been discontinued.
- The release no longer poses an immediate threat to human health, the facility, or the environment.
- All personnel have been safely evacuated (when necessary) and medical treatment obtained.
- Chemical containers, such as drums and pressure vessels, show no visible signs of additional stress or potential for leakage.

In many cases, the response to the emergency may include clean up, mitigation, and removal of spilled materials. However, a response to an emergency does not necessarily include restoration of the environment and/or facility, or recovery of all product.

## 11.1 DECONTAMINATION

Immediately upon exiting a Hot Zone and upon termination of response activities, each individual will perform personal decontamination. At minimum, individuals wearing Level D clothing (i.e., ordinary work uniforms or clothing) and not exposed to hazardous materials, will wash their hands, face, and any other potentially exposed skin with soap and water.

The following lists describe the sequence and stages of decontamination for individuals donning Levels B, C, or D-modified personal protection. A decontamination staging area will be established in the Warm Zone for this purpose. Decontamination personnel will don a level of protection no less than one level below the individual(s) being decontaminated.

Equipment that has entered the Hot Zone will be decontaminated or disposed of as necessary. Any visual contamination shall be removed where possible. Heavy equipment can be decontaminated using a high pressure water system and detergent. Wash water will be collected and containerized until the proper method of disposal can be determined.

## MEASURES FOR LEVEL A DECONTAMINATION

As indicated previously, GSK personnel are not trained to use Level A PPE. This section is provided for reference only.

### **Station 1: Equipment Drop**

Deposit equipment used onsite (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths. Segregation at the drop point reduces the probability of cross-contamination.

### **Station 2: Harness and Escape Air Removal**

Remove outer equipment and harness ensembles. Place on plastic sheeting to be decontaminated separately.

### **Station 3: Outer Suit Removal**

Remove outer Level A suit and dispose of it.

### **Station 4: SCBA Removal**

Remove SCBA from worker with the assistance of decon personnel. These personnel will hold the SCBA while any inner suits and gloves are removed.

### **Station 5: Inner Suit or Clothing Removal**

Remove any tape connecting gloves to inner suit. Slowly peel off any inner suits, if present, and invert to minimize clothing contamination. Discard suit.

### **Station 6: SCBA and Gloves**

Remove SCBA facepiece while wearing gloves. Place on plastic sheeting for decontamination. Remove inner gloves and discard.

### **Section 7: Personal Cleaning**

Wash hands and face immediately. Shower as soon as possible thereafter.

## MEASURES FOR LEVEL B DECONTAMINATION

### **Station 1: Equipment Drop**

Deposit equipment used onsite (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths. Segregation at the drop point reduces the probability of cross-contamination.

### **Station 2: Harness and Escape Air Removal**

Remove outer equipment and harness ensembles. Place on plastic sheeting to be decontaminated separately. If SCBA is worn on the outside of the suit ensemble, remove SCBA harness assembly with the assistance of decon personnel.

### **Station 3: Outer Suit Removal**

Remove any tape connecting outer gloves to outer suit. Discard tape. Slowly peel off outer suit and invert to minimize contamination. Discard suit.

### **Station 4: Inner SCBA Removal**

Remove SCBA from worker with the assistance of decon personnel. These personnel will hold the SCBA while any inner suits and gloves are removed.

### **Station 5: Inner Suit or Clothing Removal**

Remove any tape connecting gloves to inner suit. Slowly peel off any inner suits, if present, and invert to minimize clothing contamination. Discard suit.

### **Station 6: Respiratory Protection facepiece and Gloves**

Remove respirator facepiece while wearing gloves. Place on plastic sheeting for decontamination. Remove inner gloves and discard.

### **Section 7: Personal Cleaning**

Wash hands and face immediately. Shower as soon as possible thereafter.

## MEASURES FOR LEVEL C DECONTAMINATION

### **Station 1: Equipment Drop**

Deposit equipment used onsite (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths. Segregation at the drop point reduces the probability of cross-contamination.

### **Station 2: Harness and Equipment Removal**

Remove outer equipment and harness ensembles. Place on plastic sheeting to be decontaminated separately.

### **Station 3: Outer Suit, Boot and Glove Removal**

Remove any tape connecting outer gloves and boots to outer suit. Discard tape. Remove boots and discard or store for complete cleaning. Slowly peel off outer suit and invert to minimize contamination. Discard suit. Remove gloves and discard.

### **Station 4: Inner Suit or Clothing Removal**

Remove any tape connecting gloves to inner suit. Slowly peel off any inner suits, if present, and invert to minimize clothing contamination. Discard suit.

### **Station 5: Respiratory Protection Facepiece and Gloves**

Remove respirator facepiece while wearing gloves. Place on plastic sheeting for decontamination. Remove inner gloves and discard.

### **Section 7: Personal Cleaning**

Wash hands and face immediately. Shower as soon as possible thereafter.

## MEASURES FOR LEVEL D-MODIFIED DECONTAMINATION

### **Station 1: Equipment Drop**

Deposit equipment used onsite (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths. Segregation at the drop point reduces the probability of cross-contamination.

### **Station 2: Suit, Boot and Glove Removal**

Remove any tape connecting gloves and boots to suit if present. Remove boots and discard or store for complete cleaning. Slowly peel off suit and invert to minimize contamination. Discard suit. Remove gloves and discard.

### **Section 7: Personal Cleaning**

Wash hands and face immediately. Shower as soon as possible thereafter.

## 12.0 STORMWATER POLLUTION PREVENTION PLAN

### 12.1 STORMWATER MANAGEMENT PRACTICES

#### Site Description

GlaxoSmithKline (GSK) operates research and development facilities in Upper Merion, Pennsylvania on 267 acres of property located at 709 Swedeland Road. This facility primarily operates under Standard Industrial Classification (SIC) Code 2834. Research and development activities are focused on the discovery and development of pharmaceutical products that provide significant and measurable medical benefit. These activities involve a wide spectrum of experiments carried out under controlled laboratory conditions and pilot scale-up.

GSK has applied for coverage under General NPDES PAG-03 from the Pennsylvania Department of Environmental Protection (PADEP) and is required to prepare and maintain a Stormwater Pollution Prevention Plan (SPPP).

#### Outfall Location and Description

The GSK Upper Merion facility has a stormwater collection system that consists of sheet flow from the East Campus east to three stormwater discharge outfalls, which ultimately flow into the Schuylkill River. The stormwater from the West Campus flows east into an outfall, south into an outfall under Jones Road to Gulph Creek and north under Swedeland Road to Matsunk Creek. The sheet flows consist of roof run-off and parking lot run-off. Areas in each outfall potentially exposed to stormwater include dumpsters, drum storage areas, Aboveground Storage Tanks (ASTs), and loading/unloading areas.

#### Best Management Practices

GSK has implemented a number of Best Management Practices (BMPs) to minimize impacts to stormwater from industrial activities. GSK has instituted a housekeeping program at the Upper Merion facility whose purpose is to minimize the amount of waste, equipment, and materials that are located in the vicinity of industrial activities that potentially could be exposed to stormwater. This SPPP is part of the facility's Integrated Contingency Plan (ICP), which is designed to minimize the probability of accidental spills or hazardous incidents, and to define control measures for the prevention of oil and other hazardous material spillage while providing countermeasures to be taken in case of an accidental spill of any quantity within the facility. The following describes the BMPs currently being implemented to minimize exposure of industrial activities to stormwater at the facility.

Qualified personnel visually inspect areas in the facility for evidence of, or potential for pollutants entering the stormwater drainage systems. Scheduled inspections and preventive maintenance target equipment and locations where potential spills or leaks can contribute pollutants to stormwater. The areas where industrial activities can potentially be exposed to

stormwater include the following: the loading/unloading areas, dumpsters, drum storage, and other scrap storage areas. Potential spill kits are located in appropriately designed areas (e.g., storm drain covers, fire protection, secondary containment, and in the presence of spill supplies) to prevent the release of these materials in stormwater that is discharged from the facility.

The loading dock areas have spill control materials available and are graded so that spilled material will remain in the loading area and not flow into storm sewers. Storm sewer drains in the vicinity of loading/unloading areas are covered during unloading/loading activities by drain and grate "quick covers." Certain loading/unloading areas have containment, and drains in the containment area are closed via valve during loading and unloading.

Filled hazardous waste drums are stored outdoors on a pad that is diked, trenched, and has a sump, and also a roof overhead. Satellite hazardous wastes storage areas are maintained at various locations inside the facility buildings, but none are stored outdoors besides the designated drum storage area described above. Hazardous wastes are stored in sealed containers when moving from inside the buildings to the outdoor drum storage location.

All ASTs are either double walled or in containment. Periodically, an outside contractor performs ultrasonic gauge thickness testing on the metallic tank vessel walls. The sumps, trenches, and dikes are designed to contain a minimum of 110 percent of the total volume of stored material (sufficient to contain the volume of the largest container plus an allowance for precipitation). All drainage valves from diked containment areas of ASTs are manually activated and normally maintained in the closed position. If stormwater does accumulate in the AST containment areas, the condition of the storm water is inspected for evidence of pollutants before the water is drained through the valves. The opening and resealing of the drain valves is conducted under responsible supervision. A log of these inspections is maintained by GSK. A sample log can be found in Appendix K of this ICP. If there is evidence of pollutants in the collected storm water, the effluent is sampled to ensure compliance with applicable water quality standards before the water is drained from the containment areas. If the sampled effluent is unacceptable, the water is pumped out of the containment area for proper treatment and disposal. A log is maintained of events where water is emptied from AST containment areas.

Dumpsters are covered whenever possible, and the areas around the dumpsters are swept whenever the dumpsters are emptied or monthly, whichever is more frequent. There are no liquid wastes disposed of in open top dumpsters. The typical types of waste disposed of in open-top dumpsters are scrap metal or construction/demolition debris from building renovations. Municipal wastes go into closed dumpsters, and there are no hazardous wastes or materials disposed of in any dumpsters. Any spills around the dumpsters are cleaned up immediately. Affected employees are trained annually on stormwater pollution.

## **12.2 SEDIMENT & EROSION PROTECTION**

There are no areas at the facility, which due to topography, site activities, or other factors, have a high potential for significant soil erosion. Areas surrounding the buildings consist largely of paved lots and roads, grassy areas, or landscaped areas that do not contribute excess sedimentation to the stormwater sewers.

### 12.3 NON-STORMWATER DISCHARGES

GSK may occasionally discharge the following non-stormwater discharges which are authorized by Part C.1.a.(2) of the General Permit:

- Discharges from firefighting activities;
- Fire hydrant flushings;
- Potable water sources such as waterline flushings;
- Routine external building washdown that does not use detergents or other compounds;
- Pavement wash waters where spills or leaks of toxic hazardous materials have **not** occurred and where detergents are not used;
- Uncontaminated air conditioning or air compressor condensate;
- Uncontaminated groundwater;
- Foundation or footing drains where flows are not contaminated with process materials;
- Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not incidental discharge from cooling towers.

GSK performs periodic evaluations of each stormwater outfall to verify that there are no other unauthorized stormwater discharges and include the results with this SPPP.

### 12.4 SPECIAL REQUIREMENTS FOR SARA TITLE III SECTION 313 FACILITIES

There have been no releases of Section 313 water priority chemicals to the land or water in the three years prior to the most current review of this SPPP Plan. GSK currently submits a federal Form R report for Polycyclic Aromatic Compounds and benzo(g,h,i)perylene due to the combustion of fuel oil, neither of which are Section 313 Water Priority chemicals. There is no potential for stormwater pollution from Section 313 water priority chemicals from material unloading/loading activities and outdoor storage.

### 12.5 MONITORING AND SAMPLING

GSK is an Appendix J facility per the PADEP general stormwater permit. Therefore, GSK has elected to perform an annual inspection and submit the results of the inspection to the Department using the Department's forms in lieu of sampling. Inspections will be performed within 4 hours of the beginning of a rain event, during a rain event that is at least 0.1", and is at least 72 hours from the previous rain event greater than 0.1". Results of the inspection will be submitted to the Department within 28 days of the inspection. Unless otherwise requested by the Department, GSK does not intend to perform sampling and monitoring of its stormwater outfalls at this time. A copy of the form required to be used for the annual inspection can be found in Appendix J to this ICP. Section 12.7 below details the requirements of the inspection and what will be evaluated.

## 12.6 DEPARTMENT REVIEW AND COMPLIANCE SCHEDULE REQUIREMENTS

This SPPP Plan has been certified by a management representative at GSK (see Section 12.12). Copies of this plan are kept in the Environmental, Health, and Safety office, and will be made available to the Department upon request.

## 12.7 COMPREHENSIVE SITE COMPLIANCE EVALUATIONS AND RECORDKEEPING

As part of its annual inspection, GSK will conduct a comprehensive site compliance evaluation, which will include:

- 1) Visual inspection of areas contributing stormwater discharges associated with industrial activities for evidence of, or the potential for, pollutants entering the stormwater drainage system.
- 2) Evaluation of BMPs to determine whether they are adequate and are being properly implemented, or whether additional BMPs are needed.
- 3) Visual inspection of structural pollution prevention measures and spill response equipment to ensure that they are adequate and being operated correctly.

Based on the results of the evaluation, the description of potential pollutant sources, and pollution prevention measures and controls identified in this plan shall be revised as appropriate within 15 days of the inspection, and any changes required will be implemented within 90 days after the inspection.

GSK will maintain a copy of this SPPP Plan, all monitoring information, copies of all reports required to be submitted under the general permit, and records of all of the data used to complete the NOI until at least one year after coverage under the general permit terminates. GSK will also retain onsite a complete copy of the NOI, the general permit, and any other authorizations received from the Department under the general permit until at least one year after coverage under the general permit terminates. GSK will also retain onsite any sample collection records for any monitoring information collected during the term of the General Permit for a period of 6 years from the date of the sample event.

## 12.8 OTHER PLANS

GSK maintains an ICP plan for this site, which includes this SPPP.

## 12.9 FACILITY SECURITY

The facility has manned security gates for access control to the campus and there are security cameras located throughout the facility to monitor any unusual activity. All visitors and contractors must sign in and be escorted by company employees at all times.

#### 12.10 TRAINING

GSK employees whose job duties may impact stormwater, and other affected employees identified by GSK, will be trained in elements of this SPPP Plan on an annual basis. The training includes information on the ICP for the facility, the facility's emergency response coordinators and network, as well as facility spill prevention and response. The training will be documented, and copies of the training documentation will be maintained by the EHS department.

#### 12.11 PLAN UPDATE

The facility's ICP and this SPPP (as appropriate) will be reviewed and updated annually as part of the annual comprehensive site evaluation as described in Section 12.7 above. In addition, the plan(s) will be updated whenever:

- Applicable PADEP or federal regulations, or whenever this stormwater general permit is revised;
- The facility's ICP fails in an emergency;
- There is a change in facility design, industrial process, operation, or maintenance that materially increases the potential for fires, explosions, or releases of toxic or hazardous constituents; or which changes the response necessary in an emergency.
- The list of emergency coordinators or emergency response equipment changes.
- As otherwise required by PADEP.

#### 12.12 CERTIFICATIONS

##### Management Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Allen Drucker

Name

Allen W. Drucker

Signature

Director, WREF Site Operations

Title

21 Feb 2011

Date

Engineering Certification for SARA Title III Section 313 Facilities  
**(NOT CURRENTLY REQUIRED)**

I, having examined this facility and being familiar with the provisions of the "General NPDES Permit PAG-03 for Discharges of Stormwater Associated with Industrial Activities," attest that the Stormwater Pollution Prevention Plan (herein "Stormwater Pollution Prevention Plan" or "SPPP") has been prepared in accordance with good engineering practices.

NAME:

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

REGISTRATION NUMBER:

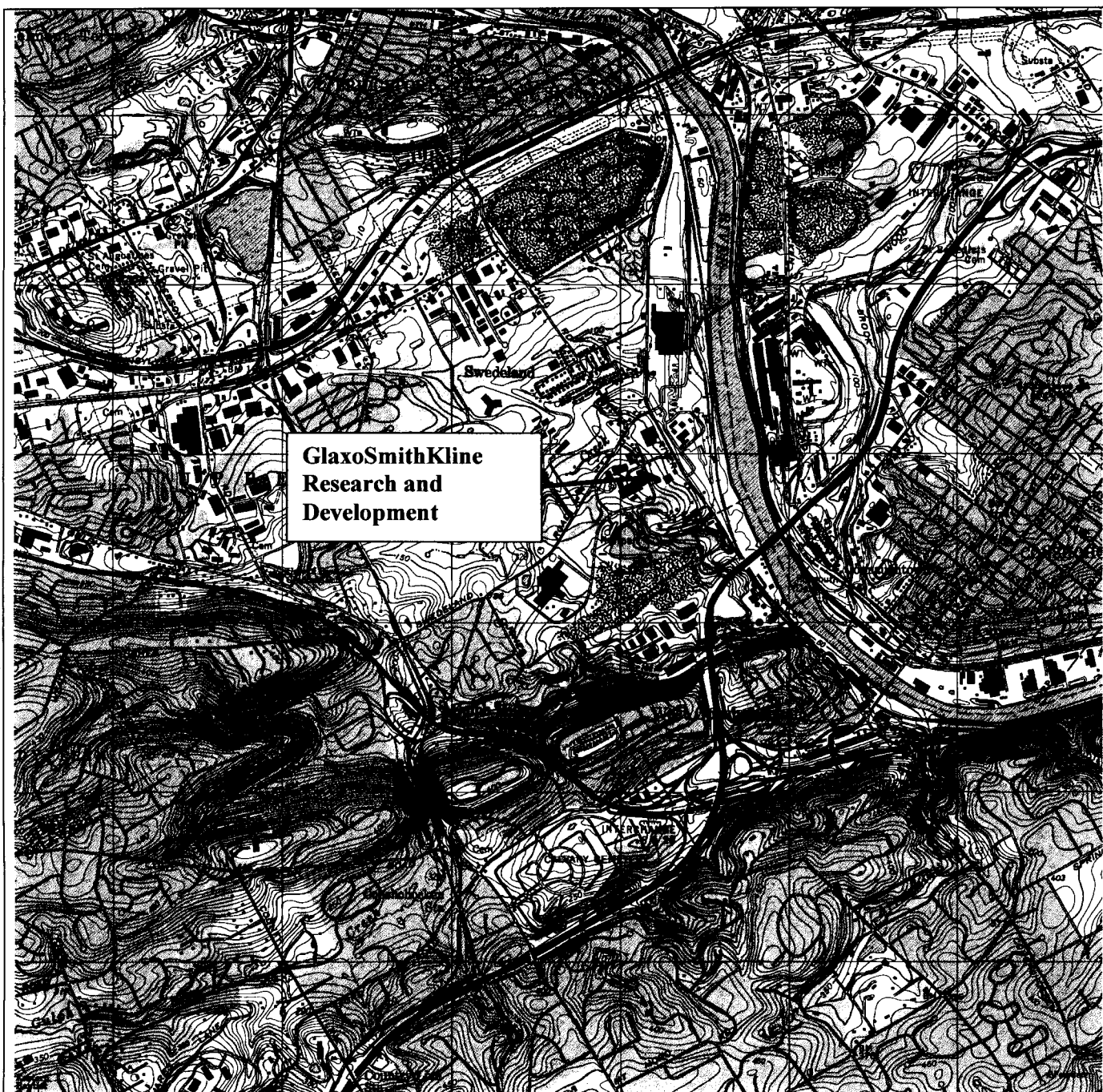
STATE OF REGISTRATION:

## **APPENDIX A**

**7½-minute USGS Quadrangle**

**General Site Plan**

**Incinerator Floor Plans**



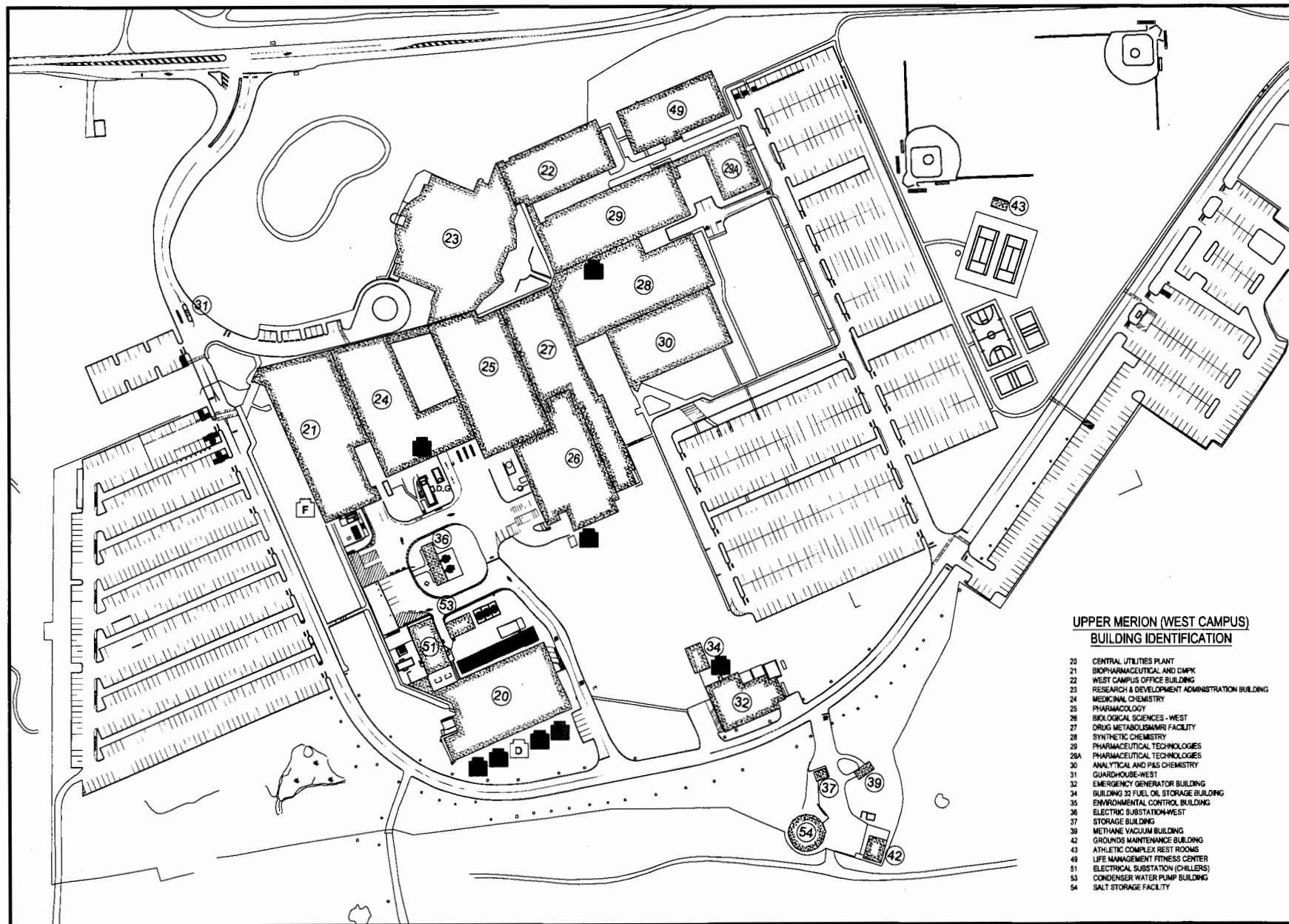
### Site Location Map

Source: U.S.G.S. 7.5 Minute Series  
Norristown, PA Quadrangle (1983)

Date: 04/23/09

Job No: EHS09101.06

Bldg. 40 - SmithKline Beecham Corp, King of Prussia, PA



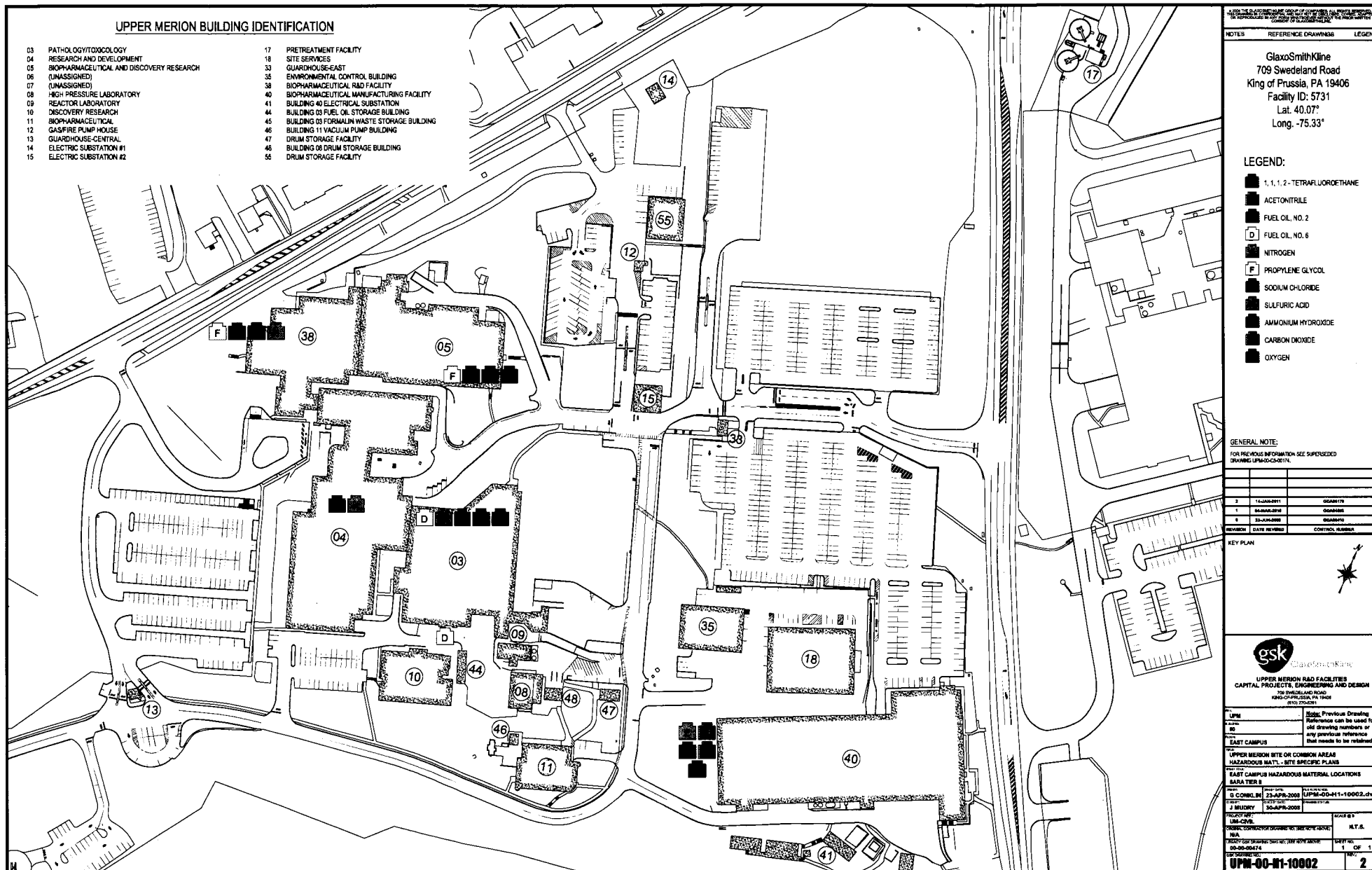
# UPPER MERION (WEST CAMPUS) BUILDING IDENTIFICATION

- 20 CENTRAL UTILITIES PLANT
- 21 BIOPHARMACEUTICAL AND CMR
- 22 WEST CAMPUS OFFICE BUILDING
- 23 RESEARCH & DEVELOPMENT ADMINISTRATION BUILDING
- 24 MEDICINAL CHEMISTRY
- 25 PHARMACOLOGY
- 26 BIOLOGICAL SCIENCES - WEST
- 27 DRUG METABOLISM/FACILITY
- 28 SYNTHETIC CHEMISTRY
- 29 PHARMACEUTICAL TECHNOLOGIES
- 30 ANALYTICAL AND PMS CHEMISTRY
- 31 GUARHOUSE-WEST
- 32 EMERGENCY GENERATOR BUILDING
- 33 BUILDING 32 FUEL OIL STORAGE BUILDING
- 34 ENVIRONMENTAL CONTROL BUILDING
- 35 ELECTRIC SUBSTATION-WEST
- 36 STORAGE BUILDING
- 37 METHANE VACUUM BUILDING
- 38 GROUNDS MAINTENANCE BUILDING
- 39 ATHLETIC COMPLEX REST ROOMS
- 40 LIFE MANAGEMENT FITNESS CENTER
- 41 ELECTRICAL SUBSTATION (CHILLERS)
- 42 CONDENSER WATER PUMP BUILDING
- 43 SALT STORAGE FACILITY

NOTES	REFERENCE DRAWINGS	LEGEND						
<p>GlaxoSmithKline 709 Swedeland Road King of Prussia, PA 19406 Facility ID: 5731 Lat. 40.07° Long. -75.33°</p>								
<p><b>LEGEND:</b></p> <ul style="list-style-type: none"> <li>■ 1, 1, 1, 2 - TETRAFLUOROETHANE</li> <li>■ ACETONITRILE</li> <li>■ FUEL OIL, NO. 2</li> <li>■ FUEL OIL, NO. 6</li> <li>■ NITROGEN</li> <li>■ PROPYLENE GLYCOL</li> <li>■ SODIUM CHLORIDE</li> <li>■ SULFURIC ACID</li> <li>■ AMMONIUM HYDROXIDE</li> <li>■ CARBON DIOXIDE</li> <li>■ OXYGEN</li> </ul>								
<p><b>GENERAL NOTE:</b> FOR PREVIOUS INFORMATION SEE SUPERSEDED DRAWING UPM-00-01-10003</p>								
<table border="1"> <thead> <tr> <th>DATE</th> <th>BY</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td>10-05-2001</td> <td>J. MURPHY</td> <td>1</td> </tr> </tbody> </table>			DATE	BY	REVISION	10-05-2001	J. MURPHY	1
DATE	BY	REVISION						
10-05-2001	J. MURPHY	1						
<p><b>KEY PLAN</b></p>								
<p><b>gsk</b> GlaxoSmithKline</p> <p>UPPER MERION ROAD FACILITIES CAPITAL PROJECTS, ENGINEERING AND DESIGN 709 SWEDELAND ROAD KING OF PRUSSIA, PA 19406 (610) 270-5041</p>								
<table border="1"> <thead> <tr> <th>DATE</th> <th>BY</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td>10-05-2001</td> <td>J. MURPHY</td> <td>1</td> </tr> </tbody> </table>			DATE	BY	REVISION	10-05-2001	J. MURPHY	1
DATE	BY	REVISION						
10-05-2001	J. MURPHY	1						
<p>UPPER MERION SITE OR COMMON AREAS HAZARDOUS MAT'L - SITE SPECIFIC PLANS</p> <p>WEST CAMPUS HAZARDOUS MATERIAL LOCATIONS SARA TIER II</p> <p>DATE: 10-05-2001 BY: J. MURPHY REVISION: 1</p> <p>PROJECT: UPM-00-01-10003 SHEET: 1 OF 1</p> <p>UPM-00-01-10003</p>								

# UPPER MERION BUILDING IDENTIFICATION

- |    |  |    |   |
|----|--|----|---|
| 03 | PATHOLOGY/TOXICOLOGY                     | 17 | PRETREATMENT FACILITY                       |
| 04 | RESEARCH AND DEVELOPMENT                 | 18 | SITE SERVICES                               |
| 05 | BIOPHARMACEUTICAL AND DISCOVERY RESEARCH | 33 | GUARDHOUSE-EAST                             |
| 06 | (UNASSIGNED)                             | 35 | ENVIRONMENTAL CONTROL BUILDING              |
| 07 | HIGH PRESSURE LABORATORY                 | 38 | BIOPHARMACEUTICAL R&D FACILITY              |
| 08 | REACTOR LABORATORY                       | 40 | BIOPHARMACEUTICAL MANUFACTURING FACILITY    |
| 09 | DISCOVERY RESEARCH                       | 41 | BUILDING 40 ELECTRICAL SUBSTATION           |
| 10 | BIOPHARMACEUTICAL                        | 44 | BUILDING 03 FUEL OIL STORAGE BUILDING       |
| 11 | GAS/FIRE PUMP HOUSE                      | 45 | BUILDING 03 FORMALIN WASTE STORAGE BUILDING |
| 12 | GUARDHOUSE-CENTRAL                       | 46 | BUILDING 11 VACUUM PUMP BUILDING            |
| 13 | ELECTRIC SUBSTATION #1                   | 47 | DRUM STORAGE FACILITY                       |
| 14 | ELECTRIC SUBSTATION #2                   | 48 | BUILDING 08 DRUM STORAGE BUILDING           |
|    |  | 55 | DRUM STORAGE FACILITY                       |



NOTES REFERENCE DRAWINGS LEGEND

GlaxoSmithKline  
709 Swedeland Road  
King of Prussia, PA 19406  
Facility ID: 5731  
Lat. 40.07°  
Long. -75.33°

## LEGEND:

- 1,1,1,2-TETRAFLUOROETHANE
- ACETONITRILE
- FUEL OIL, NO. 2
- FUEL OIL, NO. 6
- NITROGEN
- PROPYLENE GLYCOL
- SODIUM CHLORIDE
- SULFURIC ACID
- AMMONIUM HYDROXIDE
- CARBON DIOXIDE
- OXYGEN

GENERAL NOTE:  
FOR PREVIOUS INFORMATION SEE SUPERSEDED  
DRAWING UPM-00-01-10002.

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55	01/20/2002	000000

## KEY PLAN



UPPER MERION R&D FACILITIES  
CAPITAL PROJECTS, ENGINEERING AND DESIGN  
709 SWEDELAND ROAD  
KING OF PRUSSIA, PA 19406  
(610) 270-2000

UPPER MERION SITE OR COMMON AREAS  
HAZARDOUS MATERIAL - SITE SPECIFIC PLANS  
EAST CAMPUS HAZARDOUS MATERIAL LOCATIONS  
SARATYER 1

UPPER MERION SITE OR COMMON AREAS  
HAZARDOUS MATERIAL - SITE SPECIFIC PLANS  
EAST CAMPUS HAZARDOUS MATERIAL LOCATIONS  
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EAST CAMPUS HAZARDOUS MATERIAL LOCATIONS  
SARATYER 1

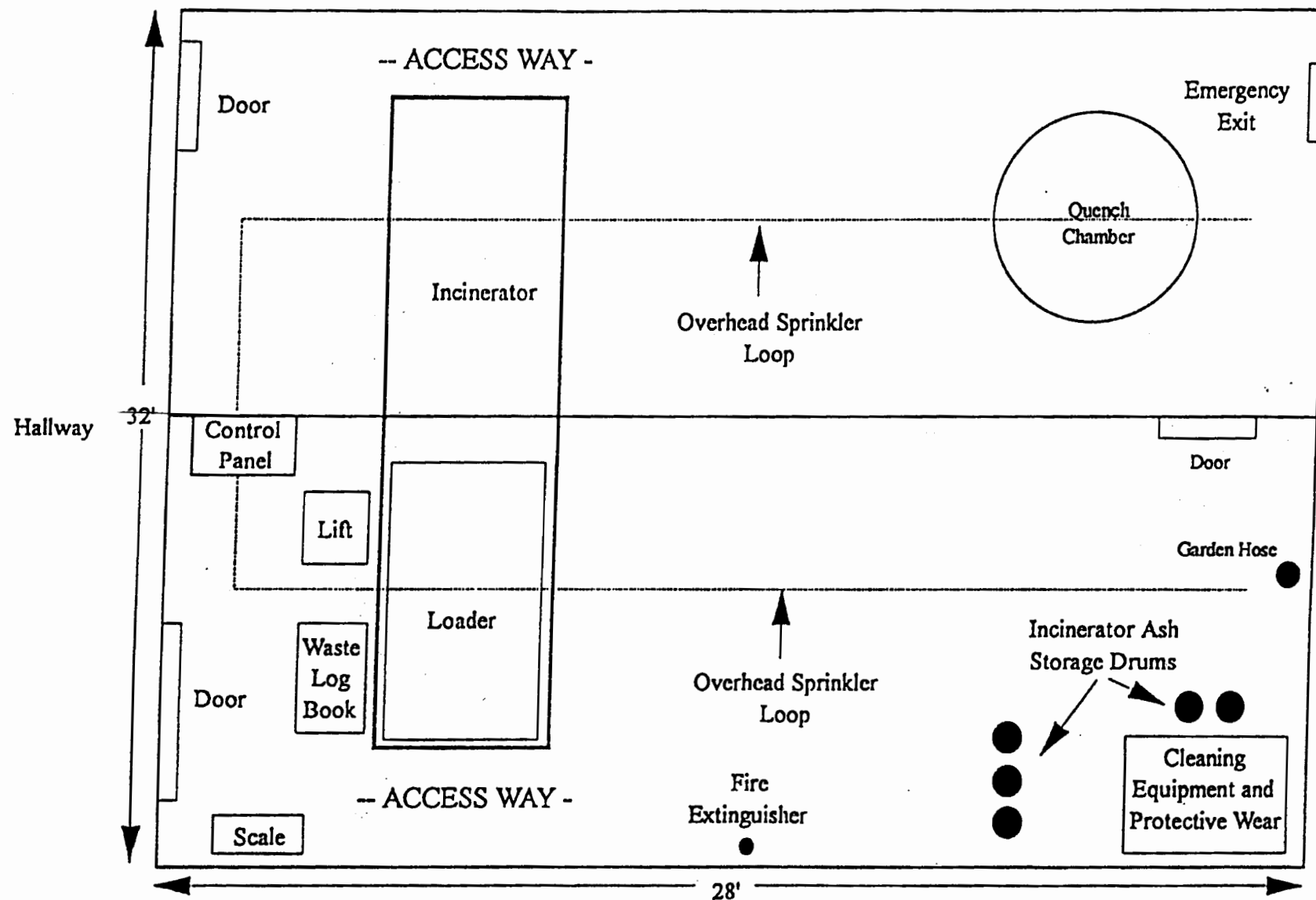
UPPER MERION SITE OR COMMON AREAS  
HAZARDOUS MATERIAL - SITE SPECIFIC PLANS  
EAST CAMPUS HAZARDOUS MATERIAL LOCATIONS  
SARATYER 1

UPPER MERION SITE OR COMMON AREAS  
HAZARDOUS MATERIAL - SITE SPECIFIC PLANS  
EAST CAMPUS HAZARDOUS MATERIAL LOCATIONS  
SARATYER 1

UPPER MERION SITE OR COMMON AREAS  
HAZARDOUS MATERIAL - SITE SPECIFIC PLANS  
EAST CAMPUS HAZARDOUS MATERIAL LOCATIONS  
SARATYER 1

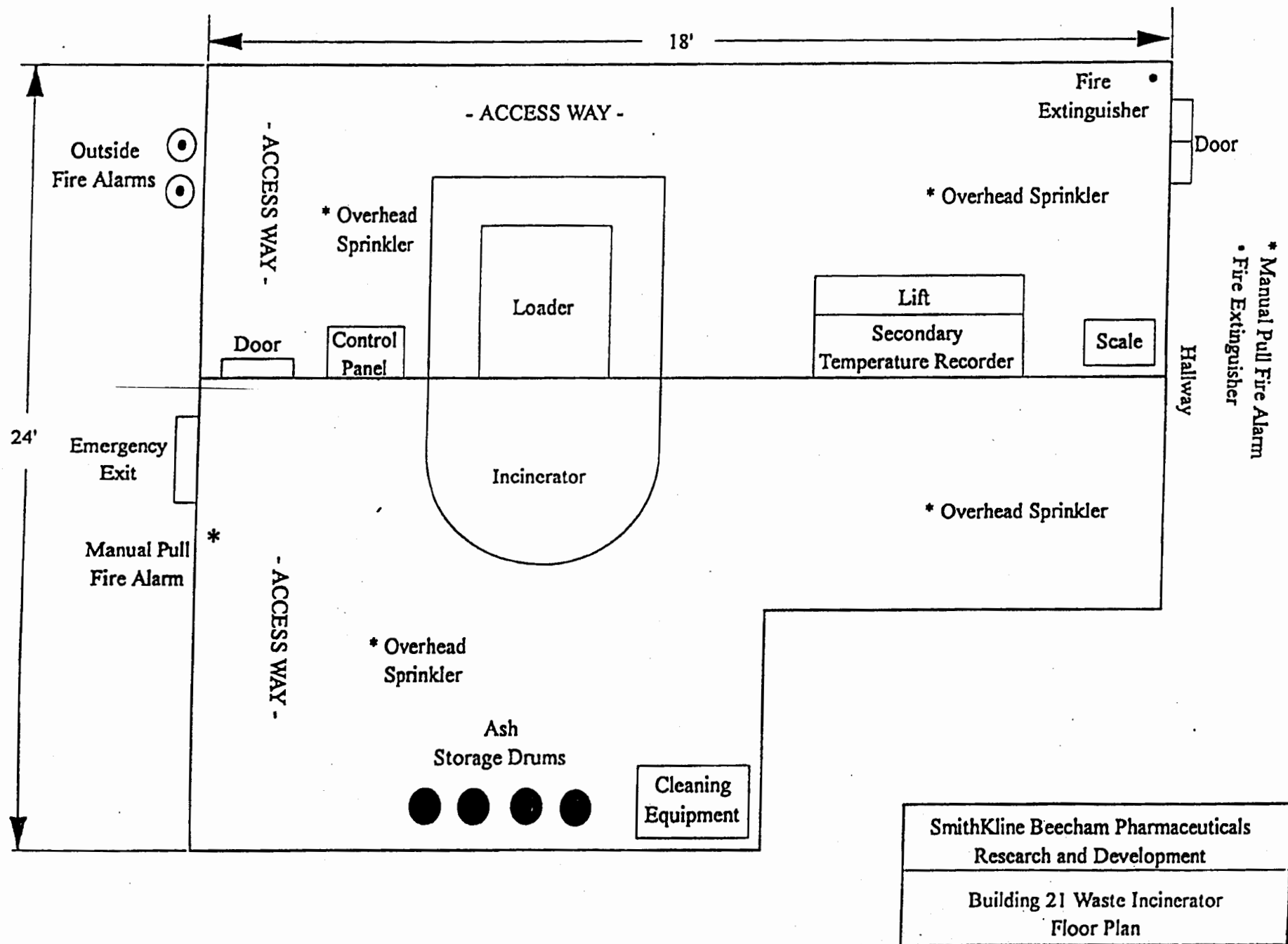
UPPER MERION SITE OR COMMON AREAS  
HAZARDOUS MATERIAL - SITE SPECIFIC PLANS  
EAST CAMPUS HAZARDOUS MATERIAL LOCATIONS  
SARATYER 1

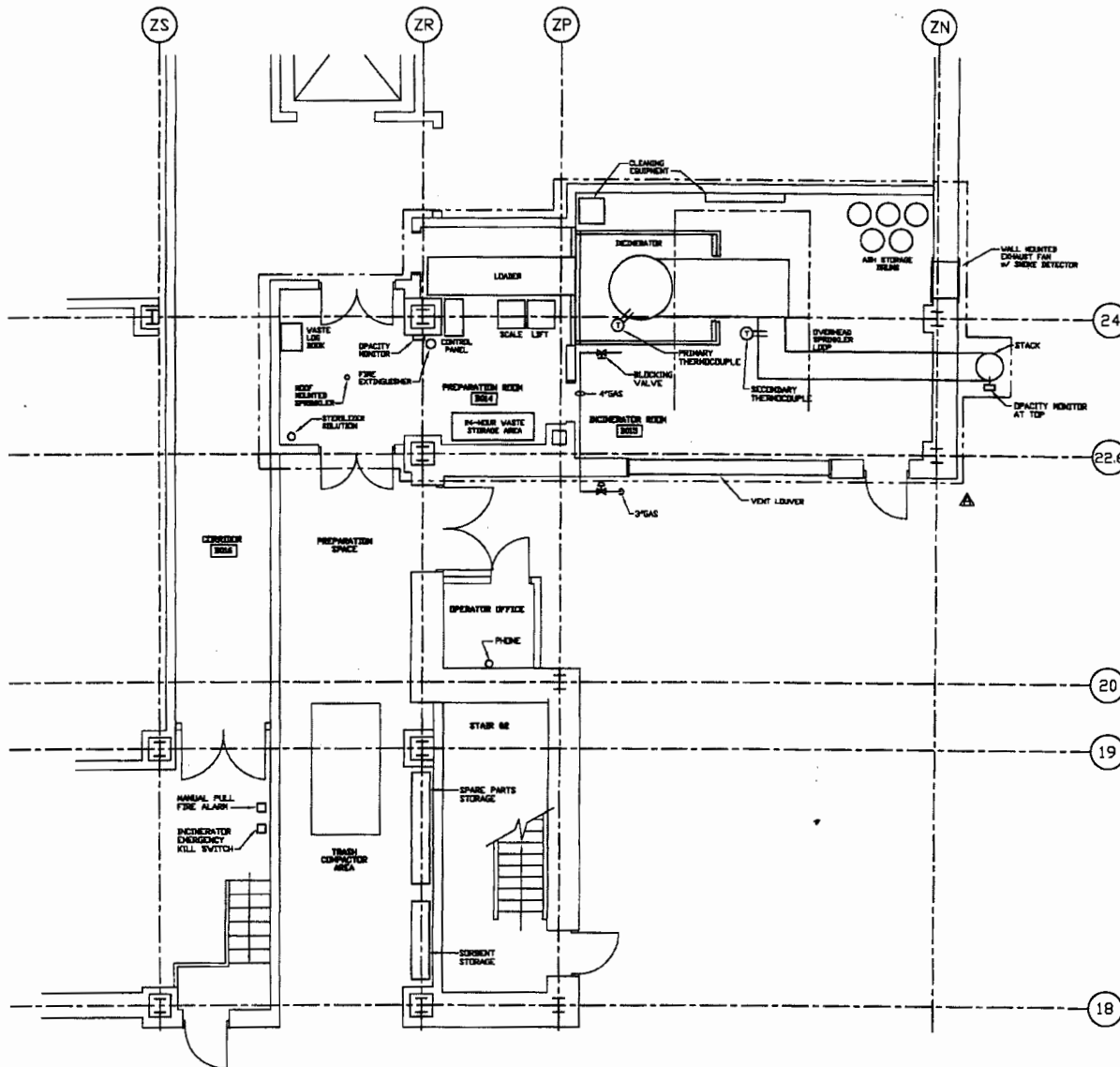
\* Manual Pull Fire Alarm  
(In Hallway)



\* Manual Pull Fire Alarm  
(In Hallway)

SmithKline Beecham Pharmaceuticals  
Research and Development  
Building 3 Waste Incinerator  
Floor Plan





**FLOOR PLAN**

1/4" = 1' - 0"  
N

**EQUIPMENT**

INCINERATOR: JVI MODEL 10-000  
SCALE: TELESCOPE MODEL 2000  
TEMPERATURE CONTROLLER/RECORDER: HONEYWELL MODEL SR400-EVF-21-00  
OPACITY MONITOR: FINEYE TYPE ET710 MODEL 1004  
CONTROL PLC: OREN SYSTACSA

**WASTE STORAGE**

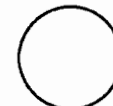
WASTE IS GENERALLY STORED IN THE AREA INDICATED; HOWEVER, IT MAY BE STORED ANYWHERE IN ROOM 204, APPROXIMATELY 200 cu ft.

**ASH STORAGE**

ASH IS GENERALLY STORED IN THE AREA INDICATED; HOWEVER, IT MAY BE STORED ANYWHERE IN ROOM 204, APPROXIMATELY 200 cu ft. ASH IS STORED IN DRUMS WITH A CAPACITY OF 30 GALLONS EACH. A MAXIMUM OF 10 DRUMS IS STORED PRIOR TO REMOVAL.

----- PERMITTED AREA

**ies**  
INTEGRATED  
ENVIRONMENTAL SERVICES



REVISION	DATE	DESCRIPTION	BY
1	5/15/93	ISSUED NOTICES AND PERMIT AREA LINES	ME

CLIENT  
**SmithKline Beecham**  
PHARMACEUTICALS  
UPPER MERION TOWNSHIP, PENNSYLVANIA

PROJECT TITLE  
**BUILDING 26  
WASTE INCINERATOR**

CONTRACT TITLE  
**EQUIPMENT  
FLOOR PLAN**

DATE APRIL 5, 1993	DESIGNED BY S.M.	REVISIONS
SCALE 1/4" = 1' - 0"	DATE M.A.F.	BY REVISION

CLIENT # 2031	PROJECT NUMBER <b>M-1</b>
DATE FILE # 2031-M1	PROJECT SET # 01

## **APPENDIX B**

	<b><u>Page Nos.</u></b>
Key Emergency Personnel Notification List	B-1
Corporate Emergency Notification List	B-1
Community/County Emergency Notification List	B-2
State Emergency Notification List	B-2
Federal/National Notification List	B-3
20-mile Downstream Industry Notification List	B-3
20-mile Downstream Municipal Notification List	B-4
Emergency Contractors Notification List	B-5
Medical Facilities Notification List	B-6

**KEY EMERGENCY PERSONNEL  
DIRECTORY & NOTIFICATION LIST (INTERNAL)**

<b>Name</b>	<b>Title</b>	<b>Work Phone Number</b>
Richard Rebar	EH&S Director, Hazardous Substances and Governance	610-270-7936
Jennifer Read	EHS Manager	610-270-4292
Leo Foley	US Radiation Manager	610-270-7854
Deanna Herman	Environmental Manager	610-917-7343
Richard Kessler	Site Security Manager	610-917-4506
Allen Drucker	Director, WREF Site Operations	610-270-6434
John DaCosta	Director, Contract Operations	610-270-5436
Robert Nash	Director, EHS	919-483-9653

**CORPORATE  
EMERGENCY NOTIFICATION LIST (INTERNAL)**

<b>Name</b>	<b>Title</b>	<b>Work Phone Number</b>
Bob Carr	SVP, Health, Safety, and Performance	215-751-7587
Melinda Stubbee	Director, R&D Communications	919-483-2510

### COMMUNITY/COUNTY EMERGENCY NOTIFICATION LIST

ORGANIZATION	BUSINESS PHONE	EMERGENCY PHONE
Upper Merion Police	610/265-3232	610/265-3232 or 9-1-1
Upper Merion Fire Dept.	610/265-5533	9-1-1
Upper Merion Ambulance	610/265-5533	9-1-1
Upper Merion Fire Marshal (Local)	610/265-2608	Same
Upper Merion Wastewater Treatment Facility 1. Matsunk Plant 2. Collection Systems 3. MIPP	610/275-0688 After 3:00 P.M. 610/275-3232 610/275-1534 610/721-0075	Same
Montgomery County Office of Emergency Preparedness (County)	610/631-6530	Same
Montgomery County Health Dept. (County)	610/278-5117	Same

Montgomery County Emergency Dispatch Office (24 hours) 610/275-1222

### STATE EMERGENCY NOTIFICATION LIST

ORGANIZATION	BUSINESS PHONE	EMERGENCY PHONE
Pennsylvania State Police Troop K Skippack Barracks	610/584-1250	Same
PA Dept. of Env. Protection		
Regional Office (24-Hour)	484/250-5900	Same
Environmental Clean-Up	484/250-5930	Same
Emergency Back-Up DEP Emergency Response	After hours 717/787-4343 or 800/541-2050	Same
Water Management	484/250-5970	Same
Waste Management	484/250-5960	Same
Air Quality	484/250-5920	Same
Pennsylvania Fish and Boat Commission	717/626-0228	Same
Pennsylvania Emergency Management Agency (State)	717/651-2001 or 800/424-7362 (24-Hour)	Same

### FEDERAL/NATIONAL NOTIFICATION LIST

ORGANIZATION	BUSINESS PHONE	EMERGENCY PHONE
CHEMTREC	800/424-9300	Same
National Response Center (National)	800/424-8802	Same

### DOWNSTREAM NOTIFICATIONS

Where petroleum or hazardous substances enter surface waters to include: storm sewers, creeks, streams, lakes or rivers, the following notifications shall be completed.

Company/Utility Name	Mile-Mark Downstream	Contact/ Phone Number	Municipality/ County
Johnson Matthey Inc, Pharmaceutical Materials 900 River Road Conshohocken, PA 19428	0	Peter McGinnis (610) 292-4402	Conshohocken/ Montgomery
Arcelor Mittal Conshohocken Road Conshohocken, PA 19428	0	Bill Paoello (610) 832-7106	Conshohocken/ Montgomery
Aqua Pennsylvania 762 Lancaster Avenue Bryn Mawr, PA 19010	4	Dr. Tom Yohe (610) 525-1400	Lower Merion/ Montgomery
Smurfitt Stone Corporation 5000 Flat Rock Road Philadelphia, PA 19127	7	Carole Blessing (215) 984-7000	Philadelphia/ Philadelphia
Philadelphia City Water Dept. ARA Tower, 5 <sup>th</sup> Floor 1101 Market Street Philadelphia, PA 19107	12	Industrial Waste Unit (215) 685-4910	Philadelphia/ Philadelphia
Philadelphia Electric Co. Schuylkill Generating Station P.O. Box 8699 Philadelphia, PA 19146	14	Supervisor (215) 841-4141	Philadelphia/ Philadelphia

<b>Company/Utility Name</b>	<b>Mile-Mark Downstream</b>	<b>Contact/ Phone Number</b>	<b>Municipality/ County</b>
Philadelphia Gas Works Passyunk Avenue 3100 Passyunk Avenue Philadelphia, PA 19145	17	Asst. Shift Superintendent (215) 787-4858	Philadelphia/ Philadelphia
Philadelphia Gas Works 1800 N. 9 <sup>th</sup> Street Philadelphia, PA 19122	18	Emergency Number (215) 235-1212	Philadelphia/ Philadelphia
Sun Refinery 3144 Passyunk Avenue Philadelphia, PA 19145	18	Receptionist (215) 339-2000	Philadelphia/ Philadelphia
<b>Municipality</b>	<b>Contact/ Phone Number</b>		<b>Municipality/ County</b>
Phila. Office of Emergency Management 240 Spring Garden Street Philadelphia, PA 19123	Fire Dept. Administration		215-686-4514
Whitemarsh Township 4021 Joshua Road Lafayette Hill, PA 19444	Whitemarsh Police		(610) 828-8000
W. Conshohocken Borough 112 Ford Street W. Conshohocken, PA 19428	Joseph Clayborne, W. Conshohocken Police Dennis Frankenfield, Fire Chief George Clay Fire Co. General		(610) 940-5842 8 AM-4PM (610)275-1222 City Dispatch after 4:00 P.M.  (610) 828-6161 (610) 828-9747
Plymouth Twp. Municipal Building 700 Belvoir Road Norristown, PA 19401	Jack Fessler		(610) 277-4311
Lower Merion Twp. 75 E. Lancaster Avenue Ardmore, PA 19003	Joseph J. Daly – Police Dept. Emergency Township Building		(610) 649-1000 (610) 642-4200 (610) 649-4000
Conshohocken Borough 8 <sup>th</sup> Avenue and Fayette Street Conshohocken, PA 19428	Jessie Stemple		(610) 828-1092

**EMERGENCY CONTRACTORS NOTIFICATION LIST**

COMPANY NAME	COMPANY ADDRESS	PHONE NUMBER
Tier DE Inc.	300 Jefferson Avenue Downingtown, PA 19335	610/873-2488
SDS Inc.	115 Rt. 46 West Suites 37 & 38 Mountain Lakes, NJ 07046	973/402-9246 (24-Hour)
Veolia Technical Services	3100 Hedley Street Philadelphia, PA 19137	215/289-3700
ELDREDGE, Inc.	898 Fern Hill Road West Chester, PA 19380	610/436-4749

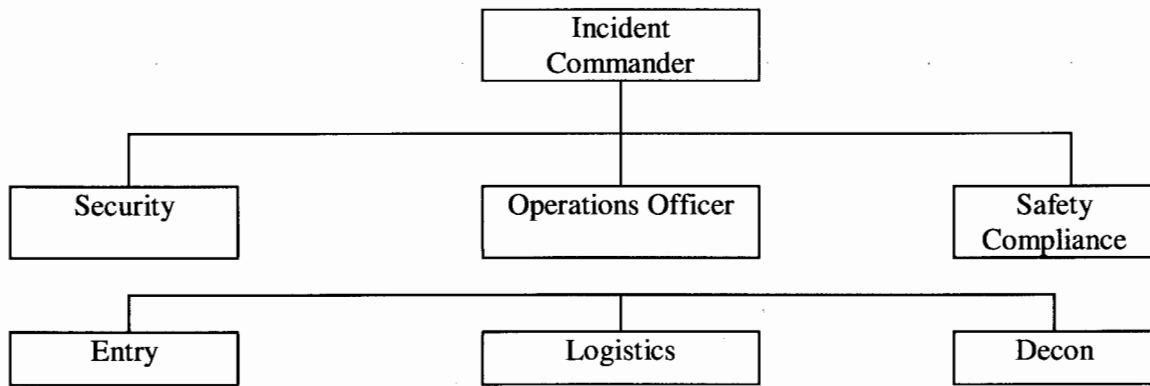
**MEDICAL FACILITIES NOTIFICATION LIST**

FACILITY	ADDRESS	PHONE NUMBERS
Montgomery Hospital (Primary)	1300 Powell Street Norristown, PA 19401	9-1-1 (Ambulance) 610/270-2000 (General) 610/270-2060 (Emergency)
Suburban General Hospital (1 <sup>st</sup> Alternate)	2701 DeKalb Pike Norristown, PA 19401	9-1-1 (Ambulance) 610/278-2000 (General) 610/278-2185 (Emergency)
Bryn Mawr Hospital (2 <sup>nd</sup> Alternate)	Bryn Mawr & Haverford Road Bryn Mawr, PA 19010	9-1-1 (Ambulance) 610/526-3000 (General) 610/526-3582 (Emergency)
Paoli Memorial Hospital (3 <sup>rd</sup> Alternate)	255 W. Lancaster Avenue Paoli, PA 19301	9-1-1 (Ambulance) 610/648-1000 (General) 610/648-1043 (Emergency)

## **APPENDIX C**

	<b><u>Page Nos.</u></b>
ICS (Incident Command System)	C-1
ICS Duties/Responsibilities	C-2
GSK Emergency Equipment	C-9

Incident Command System/GlaxoSmithKline Pharmaceuticals



## INCIDENT COMMAND SYSTEM (ICS)

### ICS RESPONSIBILITIES/DUTIES

#### ICP Coordinators:

- Identification of materials and wastes handled (materials inventory)
- Identification of potential spill sources (risk assessment)
- Establishment of spill-reporting procedures
- Visual inspection programs
- Review of past incidents and spills, and countermeasures utilized
- Establishment of training and educational programs
- Periodic review and evaluation of the Plan
- Institution of appropriate changes at regular intervals
- Review of new construction and process changes at the facility relative to the Plan
- Evaluation of the effectiveness of the overall Plan and recommendations to Senior Management on related matters

#### Site Incident Commanders (Additional):

- Maintaining an effective emergency response program and managing the site's response to an emergency condition
- Ascertaining the level of risk the emergency condition presents to site personnel, site assets, and outside resources
- Generating the required level of emergency response action to abate or control the emergency condition
- Determining and directing the evacuation of an area as determined by the emergency condition. The Site Incident Commander(s) is also responsible for directing the evacuated employees from the assembly areas to a sheltered area if weather or the emergency condition necessitate
- Determining when the emergency is over and when the site or building can return to normal functions

- Initial and continued training of the emergency response personnel. This training is structured so that the emergency response personnel will have the capability to address potential site emergencies
- Conducting an annual Emergency Response Plan drill. Drills will be critiqued and documented
- Reporting all emergencies to the appropriate member of the Senior Emergency Response Team
- Advising senior management of developments and activities affecting the site
- Notification of authorities

#### Emergency Activities Managers

- Assist the Site Incident Commander
- Provide pertinent information to Senior Management
- Provide direction and expertise within area of responsibility

#### Building Emergency Response Coordinators:

- Assisting in conducting evacuation drills. Assisting in “Drill” evaluations.
- Performing liaison with the senior management present in the assigned building
- Maintaining the emergency response program in their buildings and assisting the Site Incident Commander(s) in managing the response to emergency conditions in their area
- Monitoring specific area conditions
- Directing the evacuation of area personnel and ensuring vacated areas are free of personnel. The Building Emergency Coordinators report the results of this accounting to the senior building manager or response personnel at the assembly area.
- Assisting the Site Incident Commander(s) in evacuating employees to a sheltered area
- Evaluating emergency conditions and notifying Environmental, Health, & Safety Department, Site Incident Commander(s), Security, and the Building Emergency Coordinator if there is a risk to individuals from an emergency condition

- Activation of the fire alarm system, evacuation of occupants, and when appropriate, fighting incipient-stage fires with the available fire suppression systems (if properly trained)
- Monitoring to assure that emergency response equipment in their areas is available and functional

Employee:

- Activate appropriate alarm(s) when a fire or hazardous material or waste spill occurs which may pose a risk to personnel or the environment.
- Abide by safe operating guidelines, safety procedures and training requirements.
- Report emergency conditions to Safety and/or supervisory personnel or Security if no other assistance is available.

Emergency Response Team:

- Responding to any emergency situation which requires their expertise, as directed by the Site Incident Commander(s) or Emergency Activities Managers
- Maintaining the up-to-date technical knowledge necessary to respond to emergencies requiring their expertise
- Participating in training as members of the Emergency Response Team in specific emergency action pertaining to chemical, biological, and radiation hazards

Environmental, Health, & Safety Department (EH&S):

- Responding as a primary contact for initial notification of an emergency
- Evaluating initial emergency information and notifying Senior Management
- Coordinating all safety and environmental training activities
- Providing first-aid/CPR training to Emergency Response Managers, Emergency Team members and Security personnel.
- Providing training in the use of fire extinguishers equipment to members of Emergency Response Teams, to supervisors, and Maintenance, Security, Engineering personnel, and Emergency Coordinators.
- Inspecting emergency equipment
- Revise appropriate plans in response to site or operating conditions

Security Department:

- Ensuring proper equipping and staffing of the Emergency Control Center for use during an emergency condition
- Ensuring necessary communications at the time of an emergency
- Distributing emergency action instructions to emergency response personnel upon initial arrival
- Ensuring safe movement of emergency vehicles and other traffic in the event of an emergency condition
- Acting as otherwise indicated in other sections of this Plan or as existing in Security and Safety procedures
- After hours:
  - Being available as a primary contact for initial notification of an emergency
  - Evaluating initial emergency information and notifying the Site Incident Commander or alternate, if necessary
  - Notifying employees via fire alarm or verbal instruction of an evacuation
  - Keeping track of whether handicapped employees are within the building and the location of these individuals
  - Arranging first-aid treatment and notifying outside medical resources, if necessary
  - Coordinating action with police in the event of a bomb threat

## GSK EMERGENCY EQUIPMENT

### EMERGENCY RESPONSE TRUCK INVENTORY UPPER MERION

#### Personal Protective Equipment

Item	Quantity
Gloves (Nitrile, vinyl, cotton, PVA, silver shield, latex)	1 pack each
Saranex suits with hoods and boots – XL	1 Box
Saranex suits without hoods and boots – XXL	1 Box
Tyvek suits with boots – XXL	1 Box
Tyvek suits with boots – XXXL	2 Boxes
Boots	8 Pair
Safety Goggles	7
Safety Glasses	6
Hard hats	1

#### Respiratory Protection

Item	Quantity
SCBA Units (In Cases – Complete)	5
SCBA Units (Without Bottles)	4
SCBA Face Pieces	10
Full Face Respirators	3
Cartridges	3 Boxes
Spare SCBA Bottles	6

#### Spill Control and Testing Supplies

Item	Quantity
3M 31 Gallon Chemical Spill Response Kit	1
Universal Pig Mats (In Bags of 50)	2
Pig Haz-Mat Absorbent Pads	1 Box
Pg Haz-Mat Pulp	1 Box
Pig Haz-Mat Pillows (10)	1 Box
Pig Epoxy Stick Repair Putty (6)	1 Box
Pig Socks (Various)	1 Barrel
Schundler Vermiculite	2 Bags
Glove Bags	1 Box
Mercury Spill Kit	1
PH Paper	2 Packs

### Scene Control

Item	Quantity
Orange Cones	7
Traffic Control Flags	3
Bullhorns	2
Flashlights	4
Lightsticks	10
Vests (Incident Commander, Safety Officer, Decon, Hot Zone)	1 Each
Flood Light	1
Barrier Tape (Caution Hotzone)	1 Roll

### Decon

Item	Quantity
Decon Pool	1
Tarps	2
Decon Equipment	Ok
Tank Sprayers	2
Radiation Kit	1

### Clean-Up

Item	Quantity
Buckets (5 Gallon)	3
Trash Bags	10-15
Shovels/Brooms/Mops/Squeegee/Scoops	1Each
Mop Bucket	1
Tubs	2
Box of Cleaning Towlets	1

### Tools

Item	Quantity
Tool Box with Spark Proof Tools	1
Level	1
Drum Tools	1
Wrench (Adjustable, various sizes)	4
Hydrant Wrench	2
Small Step Ladder	2
Garden Hose with Nozzle	1

### First Aid

Item	Quantity
Stretcher	1
Fire Blanket	2
Water Gel Fire Blanket	1
First Aid Kit	2
Disposable Blankets	4

### Support Equipment

Item	Quantity
Fire Extinguishers (ABC, Foam, CO2, Water)	1 Each
Water Cooler	1
Duct Tape	1 Roll
Ground/Bonding Cables	2
Caps for Cylinders	1
Sharps Container	1
Can of WD-40	1
Petroleum only Siphon	1
Poly-Siphon	1
Binoculars	1

### Reference Material

Item	Quantity
Emergency Response Guide	2
NIOSH Pocket Guide	1
GSK Upper Merion Emergency Response Plans	1
Building Floor Plans	1 Set

### ITEMS STORED IN BUILDING 35

- 35 Fire extinguishers (all types)  
Several cases of level B suits
- 2 Cases of Tychem level A suits
- 1 Pallet of Oil Spill Response Equipment
- 1 Pallet of Acid Spill Response Equipment
- 1 Electric Drum Pump
- 15 SCBA Units w/spare bottles  
Several bags of large oil booms
- 2 Extension ladders
- 3 Confined Space Entry Kits (tripod, harness, etc.)

### SPILL KIT LOCATIONS

Chemical spill kits containing the general purpose sorbent (Safe Step) have been placed in the following locations:		
Bldg 3	Pathology Toxicology	Floors 2
	Health and Safety	Basement
Bldg 5	Molecular Genetics	First Floor
Bldg 21	Molecular Biology	Floors 1, 2
Bldg 24	Medicinal Chemistry	Floors 1, 2, 3
Bldg 25	Pharmacology	Floors 1, 2, 3
	Radiation Waste	
Bldg 27	Drug Metabolism	Floors 1, 2, 3
Bldg 28	Process Chemistry	Floors 1, 2, 3
Bldg 29	Pharmaceutics	Floors 1, 2, 3
Bldg 30	Analytical, Physical & Structural Chemistry	Floors 2, 3
Bldg 38	BPS/BPM	Floors 1, 2, 3
Bldg 10		First Floor
Bldg 11		First Floor

## HAZARDOUS MATERIALS SPILL CONTROL CABINETS

Hazardous materials spill control cabinets are designed for the use of the First Responder in a chemical release situation. The cabinets are at the following locations.

Bldg 4	Reproductive Toxicology, Near loading dock
Bldg 24	Medicinal Chemistry Near loading dock
Bldg 20	Central Utility Plant

## TYPICAL HAZARDOUS MATERIAL SPILL CONTROL CABINET INVENTORY

ITEM	AMOUNT
Saranex coated tyvek suits	2
Nitrile gloves	2 pair
Disposable Gloves	1 box
Rubber boots	3 pair
Pigmats (Gray/Pink)	10 each
Drum liners (55 Gallon Capacity)	2
Safety Glasses	2 pair
Biosafety kit	1
Absorbent Socks (Gray/Pink)	4 each
Universal Absorbent	2 bags

## **APPENDIX D**

	<u>Page Nos.</u>
Internal Spill/Release Report Form	D-1
Pollution Incident History	D-5

**GLAXOSMITHKLINE PHARMACEUTICALS**  
Internal Spill/Release Report Form

<b>Date of Report</b>	<b>Report No.</b>

<b>Part I: DESCRIPTION OF SPILL/RELEASE</b>	
1. Date/time of spill/release	
2. Location	
3. Person first reporting spill/release	
4. Identification of substance spilled/released. <div style="margin-left: 40px;">           a. Chemical name:            b. Trade name            c. CAS number            d. EPA waste code (for hazardous waste spills/releases).            e. Physical state of the substance spilled/released                ? solid                ? liquid                ? gas         </div>	
5. Estimated quantity/volume spilled/released	
6. Estimated duration(time) of spill/release	
7. Description of spill/release. Specify the cause(s) of the spill/release and the manner in which the spill/release occurred. <div style="height: 150px;"></div>	

**GLAXOSMITHKLINE PHARMACEUTICALS**

**Internal Spill/Release Report Form**

8.	Containment of the spill/release. Specify the following:
a.	Where did the spill/release occur?  <div style="margin-left: 40px;"> <input type="checkbox"/> within a contained structure  <input type="checkbox"/> inside a building                 </div>
b.	The medium or receptacle onto or into which the substance was spilled/released:  <div style="margin-left: 40px;"> <input type="checkbox"/> Air      <input type="checkbox"/> Ground/Soil/Asphalt      <input type="checkbox"/> Storm Sewer <input type="checkbox"/> Industrial Sewer                 </div>
c.	Did the spill/release reach surface water? If "yes," identify the surface water reached and describe the manner in which the spill/reached surface water.  <div style="margin-left: 40px;"> <input type="checkbox"/> Yes                      <input type="checkbox"/> No                 </div>
9.	Were any injuries sustained as a result of the spill/release? If "yes," identify the persons injured, specify the nature of the injuries sustained and identify the medical treatment  <div style="margin-left: 40px;"> <input type="checkbox"/> Yes                      <input type="checkbox"/> No                 </div>
10.	Did the spill/release have a potential environmental impact, — surface water sheen, fish kill, discoloration, odor, etc.? If "yes," describe.  <div style="margin-left: 40px;"> <input type="checkbox"/> Yes                      <input type="checkbox"/> No                 </div>

## Internal Spill/Release Report Form

<b>PART II: RESPONSE AND REMEDIATION OF SPILL/RELEASE</b>											
11.	Describe actions taken to contain, control, recover and dispose of the spilled/released substance.										
12.	Identify the colleague(s) responsible for containing, controlling, recovering and/or disposing the spilled/released substance. Identify any non-GlaxoSmithKline personnel contracted for purposes of clean-up, recovery and/or disposal.										
13.	Identify the Personal Protective Equipment used in connection with the containment, control, recovery and/or disposal of the spilled/released substance.										
14.	<div style="display: flex; justify-content: space-between;"> <span>Was the spilled/release reported to a regulatory agency?</span> <span>? Yes ? No</span> </div> <div style="margin-top: 5px;">If "Yes," provide the following information:</div> <table style="width: 100%; margin-top: 10px;"> <thead> <tr> <th style="width: 33%;">Agency Notified Date/Time (Include tel. no.)</th> <th style="width: 33%;">Individual Contacted (Oral/Written)</th> <th style="width: 33%;">Type of Report</th> </tr> </thead> <tbody> <tr> <td style="border-bottom: 1px solid black; height: 20px;"></td> <td style="border-bottom: 1px solid black; height: 20px;"></td> <td style="border-bottom: 1px solid black; height: 20px;"></td> </tr> <tr> <td style="border-bottom: 1px solid black; height: 20px;"></td> <td style="border-bottom: 1px solid black; height: 20px;"></td> <td style="border-bottom: 1px solid black; height: 20px;"></td> </tr> </tbody> </table> <div style="margin-top: 10px;">If oral, describe the information reported. If written, attach a copy of the regulatory report:</div>		Agency Notified Date/Time (Include tel. no.)	Individual Contacted (Oral/Written)	Type of Report						
Agency Notified Date/Time (Include tel. no.)	Individual Contacted (Oral/Written)	Type of Report									
15.	Specify measures taken to prevent or minimize recurrence of the spill/release:										

16. Notes, comments or additional information.
--

_____ Emergency Response Coordinator; Emergency Response Team Leader/Assistant; or Department Manager	_____ Date
---	---------------

_____ Environmental EH&S Manager	_____ Date
-------------------------------------	---------------

## POLLUTION INCIDENT HISTORY

On January 25, 1994, approximately 2,000 gallons of No. 6 fuel oil was released through the improper filling of a storage tank located outside of Building 16. This oil flowed a short distance over the soil and entered a nearby storm sewer inlet. The oil flowed through this system to a small creek. The oil did not enter into the main river system. Over 99 percent of the oil was recovered through a massive containment and clean-up effort. Extensive changes to operating procedures were undertaken to ensure no repeat of this incident. As of 2009, Building 16 has been de-commissioned and demolished.

In August 1999 approximately 42 gallons of Dowtherm J, a heat transfer media, was released from the pilot plant to the sanitary sewer. The release was caused by a broken pipe. The pipe was subsequently fixed and changes made to prevent a similar occurrence.

On February 2, 2011 approximately 30 gallons of ethylene glycol (25% solution) was released from Building 26 to the sanitary sewer. The release was caused by a gasket failure. The gasket was replaced and the cause of failure was investigated.

## **APPENDIX E**

	<u>Page Nos.</u>
Training Programs	E-1
Training Guidance Table	E-5

## TRAINING PROGRAMS

### Emergency Response Team and Emergency Coordinators

Members of the Emergency Response Team and Emergency Coordinators are trained in the following areas:

- Personal Protective Equipment
- First Aid
- Incipient-Stage Fire Fighting
- Spill Containment
- Site Alarm Systems
- Site Emergency Response Plan
- Required degree of chemical hazard information for their level of responsibility
- Bloodborne Pathogens

### Personal Protection Equipment

Members of the Emergency Response Team shall receive training on a periodic basis on personal protective equipment to be used during an emergency. This training shall be conducted by Safety. For example, this training may include discussion of general protective equipment and/or the Self-Contained Breathing Apparatus (SCBA), which shall include:

1. Explanation of the hazard and what may happen if the SCBA is used improperly
2. Discussion of the function, capabilities and limitations of the SCBA
3. Instruction in donning the respirator and checking its fit and operation
4. Proper wearing of the respirator
5. Respirator maintenance
6. Recognizing and handling emergency situations

### First Aid

Members of the Emergency Response Team shall receive instruction in first aid and CPR. This training will be coordinated through EH&S.

### Incipient-Stage Fire Fighting

EH&S shall coordinate training for members of the Emergency Response Organization, Supervisors, Maintenance, Security and Engineering personnel as needed on an annual basis.

This instruction shall be given by demonstration, practice drills and lectures. At this time, fire conditions shall be simulated, and the instructor shall explain the fundamentals of fire fighting and the use of the equipment. Employees shall receive hands-on training. The employees shall be instructed not to fight the fire if:

- The fire is clearly spreading beyond the point of origin.
- The fire could block the exit.
- The employee is unsure of how to use the extinguisher.

Employees are to fight fires only to the incipient stage, as described by OSHA Standard 29 CFR 1910.155 (c)(26).

EH&S shall inform the Emergency Response Team of any special hazards that they may encounter in the course of their duties.

#### Spill Containment

EH&S shall coordinate training for all members of the Emergency Response Team, who shall receive chemical spill containment and clean-up training on an annual basis.

This instruction shall be given by demonstration, practice drills and lectures. The instructor shall explain the fundamentals of chemical spill containment procedures and personal protection involved. The training also involves a simulation of a chemical release situation.

#### Site Alarm Systems

The Emergency Response Team and appropriate site staff shall receive annual training in identifying and properly responding to the building alarms. In addition, they shall be instructed as to what circumstances require alarm activation. They are expected to know where the manual alarms are located and how to activate them.

#### The Site ICP Plan

The Incident Commander or EH&S staff reviews this Plan with the Emergency Response Team at these times:

- When the plan is developed.
- On a periodic schedule.
- Whenever the Plan is changed.

The Incident Commander or EH&S personnel shall review with the Emergency Response Team, upon initial assignment, those parts of the plan which the employee must know in the event of an emergency.

### OIL/PETROLEUM RESPONSE TRAINING, ONLY.

All oil-related operators and appropriate personnel have been instructed by management and are familiar with the following oil spill prevention procedures:

1. No tanks and compartments are to be filled without prior checking of tank reserves.
2. No pumping operations will occur unless attended constantly by appropriate personnel.
3. Warning signs are displayed to check for line disconnections before vehicle departure.
4. All appropriate personnel are familiar with the proper operational and maintenance requirements of tanks and oil transfer equipment to prevent unplanned discharges of oil.
5. All appropriate personnel are familiar with facility spill reporting procedures and are instructed to notify their supervisor immediately in the event of an unplanned release.

Additionally, all GSK personnel receive training in the applicable components of the facility Integrated Contingency Plan (ICP). This training includes facility alarm identification and activation procedures, an annual emergency response drill, elements of the Fire Prevention Plan and other related emergency response measures.

This Plan shall be made available to all employees upon request. Emergency Response Team members shall perform their designated duties during the annual evacuation drills.

The initial training to be conducted by EH&S shall include:

- A. Identification of the Site Incident Commander and his/her responsibilities.
- B. Implementation of the Plan, which includes coverage of potential emergencies.
- C. Emergency Response Procedures, including:
  1. Evacuation
    - a. Notification
      - Alarm Systems
      - Communication Systems
    - b. Check of the Area by Building/Associate Building Coordinators
  2. Control and Containment
    - a. Safety and Incipient Fire Fighting
    - b. Shutdown of Operations
  3. Specific Responses
    - a. Fire and Explosions
    - b. Chemical Release

4. Follow-up

- a. Cleanup
- b. Restoration of Emergency Equipment
- c. Incident Investigation
- d. Notification of regulatory agencies.

D. Emergency equipment as to location, capabilities and maintenance.

E. Evacuation plans to include type of signal, routes, alternate routes, and assembly areas.

TRAINING GUIDANCE TABLE\*

	Personal Protective Equipment	Fire Fighting	Spill Containment	First Aid/CPR	Site Emergency Response Plan	Bloodborne Pathogens	Respiratory Protection/ SCBA	Incinerator Operator Training
Emergency Coordinator	X	X	X	X	X	X	X	
Emergency Response Team	X	X	X	X	X	X	X	
Supervisors	X	X			X			
Maintenance	X	X			X	X		
Security	X	X			X			
Engineering		X						
Employee	X	X			X			
ERS Personnel		X			X			X

Note: Training reviews shall be performed at a minimum of annually.  
 Training records shall be maintained on file for regulatory inspection.

\*This table is provided for guidance and is not intended to be comprehensive.

## **APPENDIX F**

	<b><u>Page Nos.</u></b>
Emergency Response Critique	F-1
ICP Modification Questionnaire	F-2
ICP Amendment Documentation Log	F-3

## EMERGENCY RESPONSE CRITIQUE AND PLAN REVIEW PROCESS

For an emergency plan to be effective in achieving its desired goals, periodic modification, review, and update may be necessary. The Plan must be reviewed and immediately amended for the following reasons:

- Regulatory requirements are revised
- The plan fails during an actual emergency
- The facility changes
- The list of key emergency personnel changes
- The list of emergency equipment changes significantly

Facility changes shall include but are not limited to: design changes, construction, operation, maintenance or any other changes which may increase the occurrence or change of occurrence of fire, explosion, spill/releases.

Plan reviews may require the addition of updated maps, charts, and tables to coincide with the new information.

Plan revisions shall be documented on Plan List of Amendments, which is contained at the end of Appendix F. This will allow the user to review the areas most recently reviewed and changed.

## ICP MODIFICATION QUESTIONNAIRE

1. Were all elements of the plan effective during the actual implementation?
2. What elements of the plan did not provide complete guidance during implementation as a result of incomplete or missing information?
3. How could improvements be implemented to make the plan more user friendly for the next response or what areas of the plan were difficult to interpret or understand?
4. Did the plan allow the user to quickly and accurately access the necessary information (i.e.; phone numbers)?
5. What information was not available in the plan that would have made a greater impact on the overall incident outcome?

# ICP AMENDMENT DOCUMENTATION

Revision #	Revision Date	Revision Mode	Next Review
1	Oct. 2001	ICP was updated to remove issues related to Building 1. At the same time administrative issues were also addressed that are too numerous to address separately.	
2	Feb. 2003	ICP was updated to address Amendments to 40 CFR Part 112	
3	May 2006	ICP was updated to remove issues related to Building 16. Building 16 was leased to Pfizer. Pfizer will be handling all regulatory responsibilities for that building.	
4	July 2006	ICP was updated to change Emergency Response Personnel and to incorporate Upper Merion Township Slug Discharge Control Plan Requirements	
5	June 2008	ICP was updated to incorporate Stormwater Pollution Prevention Plan and to update ICP contacts and Emergency Response personnel.	
6	July 2009	ICP was updated to include required fuel delivery practices and corrective actions required as a result of the 5-year review of the SPCC Plan.	
7	November 2009	ICP was updated to include remedial activities that GSK planned to implement, as identified in the July 2009 update.	
8	January 2011	ICP was updated to include remedial activities that GSK has implemented since the November 2009 update.	

## **APPENDIX G**

	<b><u>Page Nos.</u></b>
Aboveground Storage Tank Inspection Guidance	G-1
Weekly Tank Farm Inspection Form	G-2
Weekly RCRA Inspection Report	G-3

GLAXOSMITHKLINE PHARMACEUTICALS  
Aboveground Storage Tank Operations  
 Weekly Inspection Guidance

Item	Conditions to Monitor
<b>Aboveground Tank</b>	Identify leaks, cracks, bulges, debris, dents, weld-breaks, etc.
	Identify areas of corrosion, scaling, or paint peel
	Verify proper warning postings (i.e., labels, placards)
	Verify proper operation of high-level alarms
	Verify proper operation of overfill prevention systems
	Verify up-to-date tank tightness testing
<b>Piping/Valves</b>	Identify leaks, cracks, and physical damage
	Identify corrosion, scaling, or paint peel
	Verify that piping and valves are labeled
<b>Containment Area</b>	Identify cracks or damage to containment walls
	Identify cracks or damage to containment bottom
	Verify containment area will contain 110 percent of largest unit
	Verify housekeeping within containment area (i.e., trash/debris)
<b>Area Survey</b>	Identify spills or stains within loading/unloading area
	Identify accumulations of trash or debris
	Identify spills or indications of spills outside of containment

**This guidance to be used during periodic inspections as outlined in the ICP.**

**GLAXOSMITHKLINE PHARMACEUTICALS R&D  
ABOVE GROUND STORAGE TANKS INSPECTION REPORT**

Inspection: Found Satisfactory - Indicated by "S" or "NONE"  
Found Faulty - Indicated by "F" and explained in comments area

<i>Tank Id</i>	<i>Condition of Tank Exterior</i>	<i>Condition of Piping</i>	<i>Condition of Transfer Equipment</i>	<i>Condition of Secondary Containment</i>	<i>Restricted vents or drain valves</i>	<i>Safety Showers and or Equipment</i>	<i>Accumulated Water</i>	<i>Evidence of a spill or leak</i>
FT3-1								
CT3-1								
FT3-2*								
FT3-3*								
FT4-1*								
FT4-2*								
FT5-1								
FT44-1								
FT10-1*								
FT10-2*								
FT11-1*								
FT17-1*								
FT18-1*								
FT38-1*								
FT38-2*								
CT40-1								
CT40-2								
032A								
FT40-1*								
FT32-1								
033A								
CT20-1								
CT20-2								
CT20-3								
CT20-4								
CT20-5								
FT20-1*								
FT20-2								
FT24-1*								
FT24-2*								
FT032								
* Emergency generator								

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Inspector: \_\_\_\_\_ Date: \_\_\_\_\_



GlaxoSmithKline

EPA ID#: PAD980551964

RCRA Inspection Report

Date \_\_\_\_\_

	Outside Drum pad	Bldg.#35	Bldg#35 Rad. Cage	Bldg#24
Number of Drums/Containers				
Drum Condition				
Closed				
Labeled Correctly				
Appropriate Drum				
Security Appropriate				
Aisle Space Sufficient				
Spills				
Fire & Safety Protection				
Housekeeping				
Accumulation <90 days			N/A	
SUMP		N/A	N/A	

**Comments** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Inspector Signature:** \_\_\_\_\_

**Inspector should do the following:**

- a. Determine that containers are suitable for the waste
- b. Determine that containers are closed/secured properly
- c. Determine that containers are labeled correctly
- d. determine that there are no spills or hazardous complications
- e. Record the drum count on attached inventory sheet
- f. Make sure flammable drums used in pouring activities are grounded
- g. Make sure drum vents are in place

**APPENDIX H**

**CROSS REFERENCE MATRICES**

<b>EPA's Oil Pollution Prevention Regulation</b>	<b>ICP Citation</b>	<b>Section</b>	<b>Page</b>
P.E. Certifications	112.3 (d)	2	2-2, 2-4
Amendment Review	112.5 (b)	2	2-8
Facility Diagram	112.7 (a)(3)	Appendix A	NA
Container Contents and Quantities	112.7 (a)(3)(I)	3	3-3
Discharge Prevention Measures	112.7 (a)(3)(ii)	4	4-1
Discharge Drainage Controls	112.7 (a)(3)(iii)	4	4-1
Countermeasures for Discharge Discovery, Response, and Cleanup	112.7 (a)(3)(iv)	9	9-1
Methods of Disposal of Recovered Materials	112.7 (a)(3)(v)	NA	
Contact List and Phone Numbers for Response	112.7 (a)(3)(vi)	Appendix B	NA
Quantitative Spill Prediction	112.7(b)	3.2	3-9
Explanation of Non-Containment	112.7(d)	NA	
Records of Inspection and Tests	112.7 (e)	Appendix G	NA
Discussion of Conformance with applicable requirements	112.7 (j)	Appendix H	

## **APPENDIX I**

### **SLUG DISCHARGE CONTROL PLAN**

GlaxoSmithKline (GSK) has an Industrial Wastewater Discharge Permit (Permit No. 2011M-0011) issued by Upper Merion Township (Township). The Township requires GSK to prepare a slug discharge control plan as part of its permit. The Township has defined a slug discharge as any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge, which has a reasonable potential to cause interference or pass-through, or in any other way violate the Township's sewer regulations, local limits, or permit conditions. The following is GSK's slug discharge control plan, which references the appropriate sections of the Integrated Contingency Plan (ICP), into which this slug discharge control plan has been incorporated:

A. Description of discharge practices, including non-routine batch discharges

GSK discharges sanitary wastewater as well as industrial wastewater from pharmaceutical research and development activities as well as bio-pharmaceutical manufacturing at its campus located in Upper Merion Township. GSK operates a wastewater treatment plant that includes pH neutralization and flow equalization to treat wastewater prior to its discharge from the site to the Townships treatment plant. GSK does not routinely batch discharge to the Township's sewer system, and the only potential for a non-routine batch discharge would be from an accidental spill. The sections referenced below outline the types of materials that could potentially be released to the Township's sewer system and the notification procedures that will be implemented by GSK in the event of an accidental spill. GSK also implements a number of measures referenced in Section D below to prevent spills from reaching the sewer system.

B. Description of Stored Chemicals

Section 3.1.1 of the ICP contains a materials and waste inventory that lists the types and quantities of materials and wastes that could be stored at the facility.

C. Immediate Notification Procedures

Section 7.0 of the ICP contains the procedures for immediately notifying the Township of any slug discharges, including any discharges that would violate a prohibition under 40 CFR Part 403.5(b) of the federal regulations. A follow-up written notification will be submitted to the Township within 5 days of any slug discharges.

D. Best Management Practices to Prevent Adverse Spill Impacts

GSK has identified areas within its facility that present an increased risk for fire, explosion, or spills in Section 4.0 of the ICP. To minimize the potential impacts caused by fire, explosion or spills, GSK has developed engineering controls, inspection/maintenance programs, and trained its personnel in safety and job awareness, which are detailed in this section. In addition, Appendix E of the ICP describes training provided to affected employees, and Appendix G contains the inspection procedures for the hazardous waste storage areas located at the facility.

## **APPENDIX J**

### **PADEP ANNUAL STORMWATER INSPECTION FORMS**



**pennsylvania**  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

**ANNUAL INSPECTION FORM  
FOR NPDES PERMITS FOR DISCHARGES OF  
STORMWATER ASSOCIATED WITH INDUSTRIAL ACTIVITIES**

1. Date of Inspection _____  3. NPDES Permit # _____	2. Facility Owner/Operator Name and Address: _____ _____ _____ Tel: _____ Fax: _____			
4. Facility Address and Location Street _____ Municipality _____ County _____				
<b>VISUAL INSPECTION</b>				
<b>Provide the following information for the storm event</b>				
5. Duration _____				
6. Estimation of rainfall (in inches) † _____ <small>† The annual inspection should be conducted after a storm event that is greater than 0.1 inches in magnitude and that occurred at least 72 hours from the previous 0.1 inch storm event.</small>				
7. Estimate the time between the previous rain event _____				
8. Estimate the total volume (in gallons) for each outfall and report it in item 9. Volume = $C \times I \times A$ , where C is the runoff coefficient (i.e., 0.9 for paved and 0.5 for unpaved) I is the rainfall amount (in ft), and A is the area (square feet) drained to the outfall inspected (convert from cubic feet to gallons by multiplying by 7.481).				
9. Estimate the size of the drainage area (in square feet) for each outfall.				
<b>Outfall #</b>	<b>Drainage Area</b>	<b>% Paved</b>	<b>% Unpaved</b>	<b>Volume in gallons</b>

**Complete the following information for each outfall inspected (items 10 through 15)**

**VISUAL INSPECTION OF OUT FALL NUMBER**

10. Description of area(s) that drains to outfall. \_\_\_\_\_

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11. Description of stormwater management practices, erosion and sedimentation control practices, and other structural control measures that are in place to control pollutants from running off-site.

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12. Is there visible flow from the pipe? ☐ Yes ☐ No (Go to number 14) Pipe Dia. (inches) \_\_\_\_\_

- |  |             |
|--|-------------|
| a. ODOR: Chemical Musty Sewage Rotten Eggs       | Other _____ |
| b. COLOR: Clear Red Yellow Brown                 | Other _____ |
| c. CLARITY: Clear Cloudy Opaque Suspended Solids | Other _____ |
| d. FLOATABLES: Suds Oily Film Garbage Sewage     | Other _____ |
| e. DEPOSITS/STAINS: None Oily Sediment           | Other _____ |
| f. VEGETATION: None Normal Excessive Inhibited   | Other _____ |

13. Is there standing water present? ☐ Yes ☐ No (Go to number 16)

- |  |             |
|--|-------------|
| a. ODOR: Chemical Musty Sewage Rotten Eggs       | Other _____ |
| b. COLOR: Clear Red Yellow Brown                 | Other _____ |
| c. CLARITY: Clear Cloudy Opaque Suspended Solids | Other _____ |
| d. FLOATABLES: Suds Oily Film Garbage Sewage     | Other _____ |
| e. DEPOSITS/STAINS: None Oily Sediment           | Other _____ |
| f. VEGETATION: None Normal Excessive Inhibited   | Other _____ |

14. Is there any evidence of or potential for any pollutant being discharged at this outfall? ☐ Yes ☐ No

Describe: \_\_\_\_\_

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If yes, identify substances present in the sediment (if possible). \_\_\_\_\_

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15. Description of corrective measures taken or planned to remove sediments or debris if found during inspection. Please provide a schedule if actions are planned.

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### COMPREHENSIVE SITE COMPLIANCE EVALUATION

16. Do drainage maps reflect current conditions? ☐ Yes ☐ No

If no, provide your comments.

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

17. Based on review of PPC Plan (including Housekeeping Measures), are any changes, corrections or updates necessary? ☐ Yes ☐ No

If yes, provide your comments.

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

18. Have you inspected all structural stormwater controls used to implement the PPC Plan to determine if they are adequate? ☐ Yes ☐ No

If no, provide your comments.

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

19. Have you inspected the entire site to determine if erosion and sedimentation control measures are adequate? ☐ Yes ☐ No

If no, provide your comments.

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

20. Summarize corrective actions/measures completed or planned to correct any deficiencies found as a result of the inspection. Please provide a schedule if actions are planned.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

21. Signature of Inspector

Name of Inspector: \_\_\_\_\_

Date Report Prepared: \_\_\_\_\_

Signature of Inspector: \_\_\_\_\_

24. Signature of Owner/Operator of Facility

Name/Title Principal Executive Officer

Signature

Date

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION. I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SEE 18 Pa. C.S. §4904 (relating to unsworn falsification).

**APPENDIX K**

**DRAINAGE INSPECTION FORMS**

## Drainage Inspection Form

(Store in Appendix K of ICP)

Facility Name: \_\_\_\_\_

[illegible]